

BUREAU OF DESIGN AND ENVIRONMENT MANUAL

Chapter Twelve PHASE I ENGINEERING REPORTS

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CHAPTER TWELVE PHASE I ENGINEERING REPORTS

Chapter 11 discusses the goals and objectives of Phase I studies for projects administered by the Department. Chapter 12 discusses the content and format of Phase I engineering reports.

12-1 GENERAL

12-1.01 Purpose of Phase I Engineering Reports

The purpose of preparing reports for the projects in the annual and multi-year programs is to document the coordinated efforts of each district on why the Department is proposing an improvement and how the improvement will be designed to satisfy a need. Depending on the magnitude, complexity, and type of improvement proposed (e.g., new construction, reconstruction, 3R), the size of a Phase I engineering report and appropriate exhibits can vary from 10 or 20 pages to a few hundred pages.

These reports are more than just a paperwork requirement and have been created to ensure that a proposed improvement has been carefully evaluated, that appropriate policies and criteria are being used, that the design reflects an assessment of environmental concerns and, if required, that public involvement has occurred. These reports should be able to stand on their own and document all major design decisions and exceptions to policy.

12-1.02 Applicability of Report Types

Each type of Phase I study requires a corresponding report to document the findings of the investigation. Section 11-1.01 briefly identifies the study objectives and application for different types of Phase I studies. The items used to determine each type of Phase I engineering report are described below:

- Corridor Report. The funding and scope of engineering (e.g., "major" Federally-funded project on new alignment) will determine when to prepare a Corridor Report. The following will apply to a Corridor Report:
 - a. <u>Funding</u>. These projects involve Federal funding for construction or the desire to obtain future Federal reimbursement of construction costs.
 - b. <u>Engineering</u>. Typically these projects involve significant lengths of highway on new location with alternative corridors available for the proposed improvement.

- c. <u>Typical Projects</u>. Typical projects include new freeways, alternative bypasses around an urban area, or expressway designs with a considerable length of proposed highway on new locations.
- d. *Environment. Because projects are major and are Federally funded, environmental aspects are addressed in a separate section of the Corridor Report or in the first tier of a tiered EIS.
- e. <u>Review</u>. The BDE Project Development and Implementation Section reviews engineering information in the Corridor Report. The BDE Environment Section reviews the environmental information.
- *Note: Approval or concurrence of any environmental issues or approval of separate environmental documents is accomplished through coordination with the BDE Environment Section.
- 2. <u>Feasibility Study Report</u>. A Feasibility Study, which is similar in scope and purpose to a Corridor Study, is typically prepared to assess whether or not a proposed highway improvement warrants further study or additional funding for Phase I engineering costs. Chapter 11 provides a description of some of the typical feasibility studies. The following other types of investigations are applicable:
 - study of major drainage alternatives,
 - comparison of proposed interchange types at different locations, and
 - HOV studies versus other transportation alternatives.

The Feasibility Study Report documents the findings and recommendations of the study and, in many cases, may be used as a substitute for a Corridor Report. Reviews are essentially the same as for a Corridor Report and concurrence in the recommendations is by the Bureau Chief of Design and Environment.

- 3. <u>Design Report</u>. The funding and scope of engineering (e.g., "major" Federally-funded project on new alignment) will determine when to prepare a Design Report. The following will apply to a Design Report:
 - a. <u>Funding</u>. These projects involve Federal funding for construction or the desire to obtain future Federal reimbursement of construction costs.
 - b. <u>Engineering</u>. Typically, these projects involve significant lengths of highway on new location and include an analysis of potential alternative locations and a detailed design of each alternative.
 - c. <u>Typical Projects</u>. Typical projects include new freeways, new bypasses around an urban area within selected corridor, or expressway designs with considerable length of proposed highway on new locations.

- d. <u>Environment</u>. Because projects are major and are Federally funded, environmental aspects are addressed in a separate document (i.e., EA or EIS). Also, see Note in Item 1.
- e. <u>Review</u>. The BDE Project Development and Implementation Section reviews alignment design and engineering features in the Design Report. The BDE Environment Section reviews the environmental information (EA or EIS).
- 4. <u>Combined Design Report</u>. The funding and scope of engineering (e.g., "major" Federally-funded project on existing alignment) will determine when to prepare a Combined Design Report. The following will apply to a Combined Design Report:
 - a. <u>Funding</u>. These projects involve Federal funding for construction or the desire to obtain future Federal reimbursement of construction costs.
 - b. <u>Engineering</u>. Typically, these projects involve major projects using most or all of an existing highway alignment and right-of-way.
 - c. <u>Typical Projects</u>. The corridor or location is predetermined due to the design of the proposed project. Typical projects include:
 - proposed expressway designs using much of the existing highway alignment;
 - the upgrading of existing urban arterial or collector highways to add through lanes and/or the addition of a median or a change in median type;
 - the creation of a one-way couple;
 - the addition of an interchange;
 - a change in type for an existing interchange;
 - the reconstruction of an existing rural highway with a considerable number of changes to the alignment, profile, and front slopes and back slopes; or
 - the reconstruction of an existing freeway or expressway to increase capacity by adding lanes and/or to increase safety.
 - d. <u>Environment</u>. Depending upon the anticipated environmental issues involved, the project could be a Group II CE, ECAD, EA, or EIS. If the proposed improvement qualifies as a ECAD/Categorical Exclusion type project, the

- environmental documentation will be included in the Combined Design Report as a separate section. If not, a separate environmental report (EA or EIS) is prepared. Also, see Note in Item 1.
- e. <u>Review</u>. The BDE Project Development and Implementation Section reviews the engineering information, including the cross-section design presented in the Combined Design Report. The BDE Environment Section reviews the environmental information (ECAD, EA, or EIS).
- 5. <u>Project Report</u>. Only the scope of engineering (e.g., "minor" State- or Federally-funded project using existing alignment) will determine when to prepare a Project Report. The following will apply to the Project Report:
 - a. <u>Funding</u>. These projects involve Federal or State funding for construction. The
 design of the project would allow it to be programmed for either Federal or Stateonly funding.
 - b. <u>Engineering</u>. Typically, these projects involve construction projects using an existing highway alignment, right-of-way or, possibly, some minor relocations.
 - c. Typical Projects. Typical projects may include:
 - widening and resurfacing or resurfacing only of existing lanes,
 - bridge rehabilitation or total bridge replacements,
 - reconstruction of an existing intersection with minor right-of-way impacts, or
 - other 3R projects which may involve an occasional curve relocation or profile changes.
 - d. <u>Environment</u>. These projects typically qualify as Categorical Exclusions and, therefore, the environmental documentation is included in the Project Report or, for an ECAD, in a separate document that can be included in the Project Report. Also, see Note in Item 1.
 - e. <u>Review</u>. The BDE Project Development and Implementation Section reviews the Project Report. The BDE Environment Section reviews the environmental information (ECAD, EA, or special analyses and studies which may be necessary to address environmental compliance requirements for specific types of resources or "potential for unusual circumstances") and comments are passed on to Regional Field Engineers.

- 6. <u>State Improvement Report</u>. The funding and scope of engineering (e.g., "major" State-funded project) will determine when to prepare a State Improvement Report. The following will apply to a State Improvement Report:
 - a. <u>Funding</u>. A decision has been made that no Federal funds will be used for planning, right-of-way, or construction of the project.
 - b. <u>Engineering</u>. Typically, these projects involve a major construction project that may or may not use an existing highway alignment or street.
 - c. <u>Typical Projects</u>. Typical projects will include:
 - upgrading of existing urban arterial or collector highways to add through lanes and/or the addition of a median or change in median type;
 - creation of a one-way couple;
 - addition of an interchange;
 - change in type for an existing interchange; or
 - reconstruction of an existing intersection with significant right-of-way impacts.
 - d. <u>Environment</u>. Include any environmental information and documentation of public involvement coordination in the State Improvement Report (SIR). Also, see Note in Item 1.
- 7. <u>Pavement Preservation Policy (3P) Report</u>. The funding and scope of engineering (e.g., "minor" State- or Federally funded project) will determine when to prepare a 3P Report. The following will apply to a 3P project:
 - a. <u>Funding</u>. These projects may or may not involve Federal funding for construction.
 - b. <u>Engineering</u>. These projects are maintenance-type improvements to prevent further pavement deterioration by repairing and resurfacing existing pavements. Avoid projects with significant severe roadside hazards where a 3R improvement would be more appropriate.
 - c. <u>Typical Projects</u>. The emphasis of this program is to improve State highway pavements with few or no non-pavement items. Focus is on rural marked routes but urban marked routes and high-volume unmarked routes may be acceptable on a priority basis. Rural projects should be at least 1 mile (1.6 km) in length. No geometric revisions or pavement widening are permitted and acquisition of right-of-way is not allowed except for high accident locations. However, 1 ft

(300 mm) wide shoulder strips are required. Structurally deficient or functionally obsolete bridges should be gapped and addressed through other programs. Avoid projects with significant severe roadside hazards where a 3R improvement would be more appropriate.

- d. <u>Environment</u>. These projects will usually qualify as Group I CE or occasionally as a Group II CE. Also, see Note in Item 1.
- e. <u>Review</u>. Engineering information will be developed by the district using the standard 3P Report (fill in the blanks, check-off items, and attachments) and is discussed at a district coordination meeting. Occasionally, a special analysis may be required to address environmental compliance requirements. The district is responsible for compliance with engineering policies.
- 8. <u>Surface Maintenance at the Right Time (SMART) Report</u>. The funding and scope of engineering (e.g., "minor" State- or Federally funded project) will determine when to prepare a SMART Report. The following will apply to a SMART Report:
 - a. <u>Funding</u>. These projects may or may not involve Federal funding for construction.
 - b. <u>Engineering</u>. These projects are maintenance-type improvements to prevent further pavement deterioration by repairing and resurfacing existing pavements. Significant severe roadside hazards should have been previously addressed with a 3R improvement.
 - c. <u>Typical Projects</u>. The emphasis of this program is to improve State highway pavements with few or no non-pavement items. The focus is on rural marked routes but urban marked routes and high-volume unmarked routes may be acceptable on a priority basis. Rural projects should be at least 1 mile (1.6 km) in length. No geometric revisions, no pavement widening, and no shoulder work are permitted, and acquisition of right-of-way is not allowed except for HALs. Structurally deficient or functionally obsolete bridges should be gapped and addressed through other programs. Avoid projects with significant severe roadside hazards where a 3R improvement would be more appropriate.
 - d. <u>Environment</u>. These projects almost always qualify as Group I CE. Also, see Note on Item 1.
 - e. <u>Review</u>. The district will develop engineering information using the standard SMART Report (fill in the blanks, check-off items, and attachments), and the project is discussed at a district coordination meeting. Occasionally, a special analysis may be required to address environmental compliance requirements. The district is responsible for compliance with engineering policies.

12-1.03 Functions

Phase I reports provide a systematic methodology for identifying and evaluating location, design, and environmental issues. The report provides a medium for documenting the decision-making process and communicating the reasoning for the proposed improvement need. In this capacity, the report fulfills many functions, including:

- 1. <u>Project Summary</u>. Phase I reports summarize the coordinated efforts of both the district and Central Offices in determining the need for a project and how it will be designed.
- 2. <u>Public Involvement</u>. Phase I reports provide an organized document that can be used by the district to discuss improvements with the public and to ensure that the proposed project has been planned consistent with safety and cost-effective objectives.
- 3. <u>Plan Preparation Guide</u>. A Phase I report provides a reference guide for preparing construction plans and ensures that certain prerequisite design and environmental requirements have been met. This aids and expedites plan preparation, scheduling, environmental coordination, and construction.

12-1.04 Objectives

All Phase I engineering reports should meet the following general objectives:

- Present the study findings in clear, unambiguous language. As practical, the writing should be understandable to the general public.
- Do not duplicate information documented in other reports (e.g., environmental documents, TMA, Geotechnical Report, Preliminary Drainage Report, Bridge Condition Report). The Phase I engineering report should reference or summarize these other documents.
- Ensure all relevant information is included or referenced in the report so that the reader can understand the reasons for the design decisions.
- Ensure the level of detail in the report is commensurate with the conceptual objective of a Phase I study; i.e., limit the information to that needed to make major decisions.

12-1.05 Content

A Phase I engineering report should document the following, as applicable:

1. Prior Studies. List and analyze any prior studies relevant to the undertaking.

- 2. <u>Project Need</u>. Include all the necessary information, technical reports, and other materials to clearly demonstrate the study has adequately demonstrated the need for safe, fast, and efficient transportation. In addition, document the construction cost, traffic benefits, and public services provided by the highway improvement.
- 3. <u>Local Conditions and Improvements</u>. Briefly describe the highway/pavement conditions adjacent to the proposed action and any plans for future improvements. Coordinate these items between district offices for route continuity when district boundary lines fall between logical termini.
- 4. <u>Improvement Alternatives</u>. Describe the alternatives considered and discuss the anticipated social, economic, and environmental effects of the alternatives, emphasizing the significant differences and the supporting reasons for the proposed location or design. In addition, analyze the relative consistency of each alternative with the goals and objectives of any adopted local or regional urban plan. Depending on the type of study, also include the following information:
 - a. <u>Corridor Studies</u>. For Corridor Studies (see Section 11-4), describe the termini, the general type of facility, the nature of the service that the highway is intended to provide, and other major features of the alternatives.
 - b. <u>Design Studies</u>. For Design Studies (see Section 11-5), describe the critical elements such as safety and crash patterns on the existing route, applicable design criteria (e.g., new construction, reconstruction, 3R), traffic volumes, number of traffic lanes, other cross-section elements, access control/access management features, method of locating horizontal alignment, vertical profile considerations, right-of-way requirements, pedestrian considerations, intersection designs, interchange designs, hydraulic information, bridges, and other structures.
- 5. <u>Environmental Issues</u>. Summarize or reference the discussion in the environmental document on the anticipated social, economic, and environmental effects as discussed in Part III, Environmental Procedures. Identify the adverse effects, develop appropriate measures to eliminate or minimize these effects, and estimate the associated costs.
- 6. <u>Policy and Design Exceptions</u>. List any major design exceptions from IDOT policies and design criteria (e.g., engineering, environmental) together with supporting reasons, pertinent minutes of district coordination meetings, and relevant documentation of BDE coordination with FHWA, if appropriate. For geometric design exceptions, see Chapter 31.
- 7. <u>Maps and Drawings</u>. Include the appropriate maps or drawings of the location or design for which approval is requested.

- 8. <u>Summary of Public Involvement</u>. Provide a summary and analysis of the comments received from the public involvement process (see Chapter 19) and from the environmental analyses (see Part III, Environmental Procedures) based on:
 - coordination with the State's resource, recreational, planning, and historic agencies; and
 - those Federal and local agencies, public officials, and public advisory groups that IDOT knows or believes are interested in and/or affected by the proposed action.
- 9. <u>Costs and Schedules</u>. Express the costs in monetary, numerical, or qualitative terms. Estimate costs and tentative schedules for right-of-way acquisition and construction. For major projects requiring more than one construction season, provide cost estimates for individual usable segments for construction staging. The multi-year highway improvement program can then be developed using the individual segment costs rather than an estimated proportional cost of the total project.

If cost breakdowns for individual segments or improvement alternatives are necessary, use multiple columns on the cost-estimate sheet or provide multiple cost estimate sheets. For all cost estimates, indicate the base year and separate all construction, right-of-way, utility adjustment, and consultant PE costs to facilitate the programming of these items.

See Section 12-4 for more information on cost estimates.

12-2 REPORT FORMAT FOR MAJOR STUDIES

Section 12-2 presents the detailed outline format that can be used for a Corridor Report, Design Report, Combined Design Report, or State Improvement Report. Section 12-3 discusses specific requirements for report content of major and minor studies. Use the following format, as applicable, when developing reports for major studies:

I. INTRODUCTION

- A. Description and Location of Project
- B. History of Project
- C. Discussion of Design Criteria Used (e.g., new construction, reconstruction, 3R) and Highway Types Considered

II. PURPOSE AND NEED FOR THE IMPROVEMENT

- A. Conditions on Existing Highway Network
 - 1. Typical sections
 - 2. Extent of access control/access management
- B. Existing Traffic and Capacity Deficiencies
- C. Crash Information
- D. Alignment and Profile Deficiencies
- E. Corridor Studies

III. EXISTING SETTINGS OR CONDITIONS

- A. Description of Project Area
- B. Project Limits (logical termini)
- C. Land Use (fire districts, school bus, and mail routes)
- D. Environmental Resources
- E. Sensitive Environmental Areas
 - 1. Parks and recreational areas (Section 4(f) properties)
 - 2. Floodplains and waterways
 - Wetlands
 - 4. Historical sites
 - 5. Special waste sites
 - 6. Endangered species locations
 - 7. Natural areas

IV. ALTERNATIVES CONSIDERED

- A. Transportation Demand Strategies
- B. Mass Transit (if applicable)
- C. Proposed Highway Design Guidelines
 - 1. Typical sections

- 2. Design speed
 - a. Horizontal alignment
 - b. Vertical profile
- 3. To remain in place criteria
- 4. Proposed access control or access management
- D. No Action (continued maintenance)
- E. Widen Existing Roadway or Major Reconstruction of Existing Roadway
 - 1. Urban arterial improvement
 - 2. Expressway design
- F. Construction on New or Existing Locations
 - 1. Freeway design
 - 2. Expressway design
 - 3. Bypass around towns
 - 4. New rural two-lane highway
- G. Description of Intersections or Interchanges
 - 1. Locations and types
 - 2. Design features
 - 3. Level of service achieved
 - 4. Signal progression (if applicable)
 - 5. Uniformity of types

V. DESCRIPTION AND ANALYSIS OF ALTERNATIVES STUDIED IN DETAIL

- A. Attainment of Purpose and Need
- B. Traffic Service to Region
- C. Engineering Considerations Including Aesthetics (e.g., combining horizontal and vertical alignments)
- D. Important Social, Economic, and Environmental (SEE) Effects (mainly reference)
- E. Utility Involvements/Drainage Considerations
- F. Possible Mitigation Measures
- G. Discussion of Costs and Benefits
- H. Priority of Implementation

VI. COORDINATION ACTIVITIES

- A. Local Governments/Metropolitan Planning Organizations
- B. State and Federal agencies
- C. Property Owner Considerations

VII. PUBLIC INVOLVEMENT ACTIVITIES

- A. Advisory Committee and Working Groups (if desirable)
 - 1. Public interest groups
 - 2. Agricultural groups
 - 3. Growth and development groups

- 4. Public officials groups
- B. Informational Meetings/Property Owner Contacts
- C. Design Public Hearing (open house meeting)
- D. Analysis of Correspondence
- E. Commitments

VIII. CONCLUSIONS/RECOMMENDATIONS

- A. Recommended Design Alternative
- B. Supporting Reasons for Alignment Recommendation and/or Design Features (be specific)
- C. Discussion of Design Exceptions
- D. Identification of Criteria for Implementing Next Step/Phase of Study
- E. Proposed Interim Improvements or Stage Construction (if applicable)

IX. APPENDICES (Usually produced in an 11 in x 17 in format)

- A. Quad Maps and County Maps
- B. Proposed Typical Sections
- C. Schematic Drawings Showing Traffic Data
- D. Aerial Mosaics Showing Alternatives and Important Cultural Features
- E. Environmental Survey Data Shown on Aerial Mosaics, As Needed
- F. Topographic Mapping, As Needed, Showing Alternatives
- G. Oblique Photographs and Photomontages (perspective view of a proposed highway)
- H. Schematics of Interchange Designs and Approved Interchange/Intersection Design Studies (IDSs)

For major projects, prepare the Appendix as a separate document using 11 in x 17 in sheets. In this case, a separate Appendix improves the readability of the Report, allows design information to be examined more easily, and simplifies the conveyance of information to the design and land acquisition personnel.

12-3 SPECIFIC PHASE I REPORTS

Major studies should follow the detailed outline format described in Section 12-2. Section 12-3 presents information specific to the content of individual Phase I engineering reports.

12-3.01 Corridor Reports

A corridor study is developed according to the guidance in Section 11-4. In addition to the information listed in Section 12-2, also include the following in the Corridor Report:

- 1. <u>Structure of Report</u>. Lay out the Corridor Report in the format as shown in Section 12-2. In addition, consider the following:
 - a. <u>Table of Contents</u>. Provide a table of contents for the report that should list each separate report section, the figures and tables, and appendices.
 - b. <u>Page Numbers</u>. Consecutively number the pages in the report including all exhibits and figures (i.e., do not renumber each major section).
 - c. <u>Exhibits</u>. Show all exhibits as figures with figure numbering for easy referencing. Place figures, small maps, and tables at the back of the report and reference them in the text. Place large figures (11 in x 17 in format) in an Appendix to the report. Removing the figures and tables from the text allows for easier reading and review of the report, quicker access to a desired page number, and more effective positioning and access of materials that are used to support the text.
 - d. <u>Cross References</u>. Provide cross-references to information provided elsewhere in the report (e.g., other sections, figures, appendices).
- 2. <u>County Maps</u>. Use 11 in x 17 in sheets and a scale of either 1 in = 1 mile (1:60,000 metric) or 1 in = 2 miles (1:120,000 metric). Indicate the following on these maps:
 - all corridors studied;
 - all acceptable corridors; and
 - existing and proposed land use including:
 - flood plains/floodways,
 - + school districts,
 - + fire protection districts,
 - + recreational areas and lakes (existing and proposed),
 - + airports,
 - + historic sites,
 - + archaeological sites (only show on internal use maps),
 - CERCLIS sites,

- wetland sites/natural resources, and
- + other pertinent information.
- 3. <u>USGS Quadrangle Maps</u>. Use 11 in x 17 in sheets and a scale of 1 in = 2000 ft (1:24,000 metric). This larger scale is used to provide more detail on the project and to show topography.
- 4. <u>Traffic Data</u>. Determine design year ADT volumes for all acceptable corridors. This data is used during the corridor selection stage. Prepare ADT volume data for other highways within the area of influence and determine the impacts the improvement will have on the entire system of highways in the area.
- 5. <u>Corridor Report Discussion</u>. Discuss the following items:
 - a. <u>General Description</u>. Describe the following for each alternative:
 - purpose and need of the project,
 - logical termini,
 - general type of facility,
 - nature of service which the highway is intended to provide, and
 - other major features.
 - b. <u>Prior Studies</u>. Discuss any prior studies relevant to the undertaking (e.g., feasibility studies) and a reaffirmation of the need for the improvement.
 - c. <u>Eliminated Alternatives</u>. Discuss the alternative corridors considered but not studied further, and describe the reason(s) the alternatives were discounted. Identify and discuss the environmental factors (as discussed in Part III, Environmental Procedures) that were considered in the preliminary investigation but were not considered significant determinants among the alternatives.
 - d. <u>Compatibility with Highway System</u>. Discuss the compatibility of the alternatives studied with the existing street and highway plans or related comprehensive plans. Where these plans do not exist, discuss the extent of coordination with local officials concerning highway needs.
 - e. <u>Compatibility with Other Plans</u>. Discuss the compatibility of the alternatives studied with the plans and objectives of all agencies affected by the improvement.
 - f. <u>Advantages and Disadvantages of Final Alternatives</u>. Discuss the advantages and disadvantages of the final acceptable corridors, including the no-action alternative. Discuss the issues of primary concern to the Department such as construction costs, right-of-way acquisition, highway maintenance, traffic operations, type of access control, and any other pertinent engineering aspects

(see Section 11-4) of the improvement. Also, when applicable, discuss other transportation facilities in the corridor.

- g. <u>Environmental Considerations</u>. Discuss the socio-economic and environmental advantages and disadvantages of the final acceptable corridors, including the no-action improvement alternative. Discuss the environmental considerations as they relate to each alternative (see Part III, Environmental Procedures). Identify the adverse effects, appropriate measures to minimize or eliminate the adverse effects, and the costs to do so.
- h. <u>Impacts on Existing Communities</u>. In addition to the general factors mentioned above, discuss the impacts on existing communities where a corridor passes near or through an urban area. Include the following in the discussion:
 - change in travel patterns;
 - the estimated number of people, dwelling units, and business establishments being displaced and the economic effects on the communities;
 - the potential for land use change and the likelihood of joint development;
 and
 - the relative consistency of the alternatives with the goals and objectives of any urban plan adopted by the community concerned.

These factors will often significantly impact the selection of the corridor location in densely populated areas. Ensure that the proposed corridor adequately reflects the urban transportation planning process.

- i. <u>Public Involvement and Environmental Coordination</u>. Include a summary and analysis of the views received as a result of public involvement activities and environmental coordination.
- j. <u>Recommended Corridor</u>. Identify the recommended corridor and provide a synopsis of the determinants used in making the final selection.
- 6. <u>Estimate of Cost</u>. Include a general estimate of right-of-way and construction costs for those corridors that have not been eliminated. The estimate should reflect the effects the proposed improvement will have on the existing transportation system in conjunction with other needed proposed improvements in the corridor.
- 7. <u>Map Exhibits</u>. In the discussion, reference all exhibits used in the study. As needed, develop map exhibits and other exhibits on 11 in x 17 in sheets. If a large number of

exhibits are planned for the report, prepare a separate Appendix for the report. A separate Appendix provides a more useful format.

12-3.02 Feasibility Study Reports

A feasibility study is very similar to the details described for a corridor study and, in many cases, the feasibility study is documented in a similar format as a Corridor Report. See Sections 11-1.01(c) and 12-1.02 for typical situations where a feasibility study is initiated.

12-3.03 Design Reports

A design study is developed according to the guidance in Section 11-5. In addition to the information listed in Section 12-2, consider the following items in the preparation of the Design Report:

- 1 <u>Structure of Report</u>. Lay out the Design Report in the format as shown in Section 12-2. In addition, consider the following:
 - a. <u>Table of Contents</u>. Provide a table of contents for the report that should list each separate report section, the figures and tables, appendices, and other reports included with the Design Report.
 - b. <u>Page Numbers</u>. Consecutively number the pages in the report including all exhibits and figures (i.e., do not renumber each major section).
 - c. <u>Exhibits</u>. Show all exhibits as figures with figure numbering for easy referencing. Place figures, small maps, and tables at the back of the report and reference them in the text. Place large figures (11 in x 17 in format) in either Appendix A or B. Removing the figures and tables from the text allows for easier reading and review of the report, quicker access to a desired page number, and more effective positioning and access of materials that are used to support the text.
 - d. <u>Technical Reports</u>. Provide a summary or reference the information provided in the technical reports.
 - e. <u>Cross References</u>. Provide cross-references to information provided elsewhere in the report (e.g., other sections, figures, appendices).
 - f. <u>Checklist</u>. Section 12-3.09 provides a checklist that may be used to ensure all applicable project information, certifications, coordination, and other requirements are covered in the Design Report.
- 2. Design Report Discussions. Include the following discussions in the Design Report:

- a. <u>Summary of Need and Location</u>. Provide a summary of the need for the improvement and reasons supporting the general location of the highway as described in the Corridor Report.
- b. <u>Prior Studies</u>. Include an analysis and listing of prior studies relevant to the improvement.
- c. <u>Plausible Alternatives</u>. Discuss the plausible alternatives considered but not studied in depth, and provide a detailed explanation of why these alternatives were eliminated. Also address the "no-action" alternative.
- d. <u>Major Design Features</u>. Provide a detailed explanation of how major control points (e.g., interchange locations, river crossings, topography) were selected for the location of alignments on mapping; how the alignment best satisfies the geometric needs of an intersection or interchange; selected median types; and how the profile relates to the intersections and interchanges so that driver decision points are not hidden or cause visual obstructions. Also, provide a detailed explanation of aesthetic considerations for combining alignment and profiles; see Chapter 33.
- e. <u>Compatibility with Highway System</u>. Discuss the compatibility of the alternatives studied with existing street and highway plans including any necessary detours. Also discuss the compatibility of alternatives with comprehensive urbanized plans or, where these plans do not exist, the extent of coordination with local officials concerning their highway needs.
- f. <u>Environmental Considerations</u>. Present the social, economic, and environmental advantages and disadvantages of the final alternatives studied, including the "no-action" alternative. Part III, Environmental Procedures, discusses environmental considerations.
- g. <u>Final Alternatives</u>. Discuss the advantages and disadvantages of the final alternatives studied with respect to:
 - purpose and need;
 - traffic service, safety and operations;
 - construction and maintenance considerations and costs; and
 - other pertinent aspects, such as those revealed by engineering analyses;
 see Section 11-2.

- h. <u>Public Involvement and Environmental Coordination</u>. Provide a summary and an analysis of comments and concerns received as a result of public involvement activities and environmental coordination.
- i. <u>Maintenance and Protection of Traffic</u>. If applicable, discuss the management of existing traffic during construction; see Chapter 13.
- j. <u>Commitments</u>. Provide a list of commitments made during the public involvement process and interagency coordination. This list should eventually be discussed with the Phase II design squad and then transmitted to construction personnel.
- k. <u>Recommended Alternative</u>. Identify the recommended design alternative and present a synopsis of the determinants for its selection. Demonstrate that the recommended alternative best meets the purpose and need of the project with consideration of its social and environmental impacts.
- 3. <u>Estimate of Costs</u>. Prepare a cost estimate for all final alternatives developed by usable segments. A usable segment is suitable for traffic operations and construction phasing. The estimate format should follow that shown in Section 12-4 and Chapter 65.
- 4. <u>Typical Sections</u>. Provide typical sections for all proposed and affected roadways. Include pavement cross sections from preliminary pavement designs.
- 5. <u>Base Maps</u>. Use county maps or USGS Quadrangle Maps as a base map to show all alternatives considered initially, the final alternatives advanced for detailed study, and the termini of the design study.
- 6. <u>Aerial Photography</u>. Use uncontrolled photography in rural areas and controlled aerial photography in urban areas. Indicate the access control limits and sensitive environmental features for the alternatives advanced for detailed study. Prepare these exhibits on 11 in x 17 in sheets and place them in a separate Appendix A. This Appendix is used in conjunction with an EIS or EA and for the overall design study. Section 11-2.03 and Chapter 35 discuss access control features. Include in the Design Report a discussion on the specific access control features of the project. The Report should analyze and justify road closures and access features on expressways and freeways; see Sections 11-7.02 and Chapter 44.
- 7. <u>Mapping Exhibits</u>. Reduce original mylar sheets of mapping at 1 in = 50 ft (1:500 metric) or 1 in = 200 ft (1:2500 metric) scales by 50% to 1 in = 100 ft (1:1000 metric) and 1 in = 400 ft (1:5000 metric), respectively. Prepare mapping exhibits as plan and profile sheets for reduction on 11 in x 17 in sheets. Show the following on the mapping sheets:
 - State plane coordinates for all control points,
 - right-of-way limits,
 - preliminary design data,

- structure locations,
- horizontal alignment,
- proposed frontage roads and service drives, and
- current ADTs for all intersected or affected roadways.

Use a vertical scale of 1 in = 20 ft (1:250 metric) with 1 in = 200 ft (1:2500 metric) mapping and a vertical scale of 1 in = 5 ft (1:50 metric) with 1 in = 50 ft (1:500 metric) mapping. Combine the complete design of the highway as shown on the mapping sheets with the profile to make the final plan and profile sheets. Place these final reduced sheets into a separate Appendix B.

- 8. <u>Intersection/Interchange Design Studies</u>. Include approved IDSs for all interchanges and major intersections for each studied alignment carried to a public hearing. Prepare Intersection Design Studies in accordance with Chapter 14 and Interchange Type and Design Studies in accordance with Chapter 15. Include reduced-size copies of approved IDSs in Appendix B.
- 9. Public Involvement Document. On large complex projects, a considerable volume of letters is received from the public and different agencies concerning the need for the project and the possible impacts. For guidance on responses, refer to Section 19-6.04, Section 24-2, Activity 15, and Section 25-2, Activity 23. To organize this information and to make it more useful for future reference in case of litigation or questions concerning environmental issues, the letters and their responses are included together in a separate volume. When a large number of similar comments are received, it may be advantageous to prepare a newsletter and mail to public meeting participants.

12-3.04 Combined Design Reports

The Combined Design Report is prepared where the corridor or location is predetermined due to the design of the proposed project. See Section 12-1.02 for a listing of typical projects in this category. At a minimum, the Combined Design Report should include the items listed in Section 12-2 and the following:

- 1. <u>Structure of Report</u>. Lay out the Combined Design Report in the format as shown in Section 12-2. In addition, consider the following:
 - a. <u>Table of Contents</u>. Provide a table of contents for the report that should list each separate report section, the figures and tables, appendices, and other reports included with the Combined Design Report.
 - b. <u>Page Numbers</u>. Consecutively number the pages in the report including all exhibits and figures (i.e., do not renumber each major section).
 - c. <u>Exhibits</u>. Show all exhibits as figures with figure numbering for easy referencing. Place figures, small maps, and tables at the back of the report and reference them

in the text. Place large figures (11 in x 17 in format) in either Appendix A or B. Removing the figures and tables from the text allows for easier reading and review of the report, quicker access to a desired page number, and more effective positioning and access of materials that are used to support the text.

- d. <u>Technical Reports</u>. Provide a summary or reference the information provided in the technical reports.
- e. <u>Cross References</u>. Provide cross references to information provided elsewhere in the report (e.g., other sections, figures, appendices).
- f. <u>Checklist</u>. Section 12-3.09 provides a checklist that may be used to ensure all applicable project information, certifications, coordination, and other requirements are covered in the Combined Design Report.
- 2. <u>Functional Classification</u>. Identify the functional classification of the highway proposed for improvement and for all affected roadways.
- 3. <u>Typical Sections</u>. Provide typical sections for the proposed improvement and all side roads. Include pavement cross sections from the preliminary pavement design.
- 4. <u>Traffic Volumes</u>. Include the current and design year traffic volumes for the proposed facility and for all crossroads; see Section 11-2.02.
- 5. Area Map. Provide an area map that indicates the general location of the improvement.
- 6. <u>Existing Conditions and Alternative Features</u>. Present the existing conditions and features along the proposed improvement. This information may be shown on a county map, city map, or photographic aerial mosaic, as needed, to adequately illustrate differences and termini. Prepare these exhibits on 11 in x 17 in sheets.
- 7. <u>Major Design Features</u>. Indicate the criteria used (e.g., new construction, reconstruction) and present, on appropriate exhibits such as topographic mapping, the proposed design for the project. Include horizontal and vertical alignment revisions, intersections, entrances, any grade separations, drainage structures, and other major design features. The original mylar sheets of mapping with proposed design features are reduced 50% and prepared on 11 in x 17 in sheets for the report. If an extensive number of exhibits are needed, place them in an Appendix to the report. Also, include the appropriate information from any engineering analyses; see Section 11-2.
- 8. <u>Right-of-Way Requirements</u>. Provide an indication of the right-of-way to be acquired in sufficient detail to inform an individual of the affect on his or her property. This is usually shown on topographic mapping for the project. Also, discuss the resolution of any encroachment or utility adjustment problems.

- 9. <u>Intersection/Interchange Design Studies</u>. Include approved Intersection Design Studies (Chapter 14) or Interchange Type and Design Studies (Chapter 15) for all major intersections. Use an 11 in x 17 in reduced size sheet format.
- 10. <u>Estimate of Costs</u>. Provide cost estimates by usable segments, if applicable, or for an isolated project in accordance with the format in Section 12-4 and Chapter 65.
- 11. <u>Combined Design Report Discussion</u>. Discuss the following items:
 - a. <u>General Description</u>. Describe the need for the improvement, the general type of facility, the nature of service which the highway is intended to provide, and the adjacent highway sections including any plans for improvements on adjacent sections.
 - b. <u>Corridor Feasibility</u>. Discuss the reasons that no other corridor or location is feasible.
 - c. <u>Alternatives and Environmental Considerations</u>. Discuss any plausible alternatives considered and the reasons why these alternatives were eliminated. Use the ECAD record form as a checklist to identify the social, economic, and environmental considerations. For large complex projects, an EA or EIS may be required; see Part III, Environmental Procedures.
 - d. <u>Compatibility with Highway System</u>. Discuss the compatibility of the alternatives studied with existing street and highway plans including related comprehensive urban plans and pedestrian facilities. Where these plans do not exist, discuss the extent of coordination with local officials on highway needs.
 - e. <u>Final Alternatives</u>. Discuss the advantages and disadvantages of the alignment or cross section alternatives studied with respect to the following:
 - purpose and need;
 - traffic service, safety, and operations;
 - maintenance and protection of traffic during construction;
 - the need for bridge improvements;
 - the need for traffic signals and progression;
 - access control or access management considerations;
 - construction costs and right-of-way impacts; and

- other pertinent aspects (e.g., those revealed by an engineering analysis); see Section 11-2.
- f. <u>Recommended Improvement</u>. Provide a summary of facts leading to the recommended improvement, including the consideration of the "no-action" alternative and an analysis of all comments received as a result of public involvement (see Chapter 19) and environmental coordination (see Part III, Environmental Procedures).
- g. <u>Commitments</u>. Provide a list of commitments made during the public involvement process and interagency coordination. This list should eventually be discussed with the Phase II design squad and then transmitted to construction personnel.
- 12. Public Involvement Document. On large complex projects, a considerable volume of letters is received from the public and different agencies concerning the need for the project and the possible impacts. For guidance on responses, refer to Section 19-6.04, Section 24-2, Activity 15 and Section 25-2, Activity 23. To organize this information and to make it more useful for future reference in case of litigation or questions concerning environmental issues, the letters and their responses are included together in a separate volume. When a large number of similar comments are received, it may be advantageous to prepare a newsletter and mail to public meeting participants.

12-3.05 State Improvement Reports

A State Improvement Report is a combined engineering/environmental document prepared for a State-only or State and locally funded project. This report is used when the scope of the project is major in nature and a programming decision is made that no Federal funds will be used for planning, right-of-way, or construction of the project. See Section 12-1.02 for a description of typical projects. Environmental information, agency coordination, and public involvement coordination are included in the report. Consider the following when preparing State Improvement Reports:

- 1. <u>Format</u>. The format of a State Improvement Report generally will be similar to that of a Combined Design Report; see Section 12-3.04.
- 2. <u>Structure of Report</u>. Lay out the State Improvement Report in the format as shown in Section 12-2. In addition, consider the following:
 - a. <u>Table of Contents</u>. Provide a table of contents for the report that should list each separate report section, the figures and tables, appendices, and other reports included with the State Improvement Report.
 - b. <u>Page Numbers</u>. Consecutively number the pages in the report including all exhibits and figures (i.e., do not renumber each major section).

- c. <u>Exhibits</u>. Show all exhibits as figures with figure numbering for easy referencing. Place figures, small maps, and tables at the back of the report and reference them in the text. Place large figures (11 in x 17 in format) in either Appendix A or B. Removing the figures and tables from the text allows for easier reading and review of the report, quicker access to a desired page number, and more effective positioning and access of materials that are used to support the text.
- d. <u>Technical Reports</u>. Provide a summary or reference the information provided in the technical reports.
- e. <u>Cross References</u>. Provide cross-references to information provided elsewhere in the report (e.g., other sections, figures, appendices).
- f. <u>Checklist</u>. Section 12-3.09 provides a checklist that may be used to ensure all applicable project information, certifications, coordination, and other requirements are covered in the State Improvement Report.
- 3. <u>Content</u>. The content of a State Improvement Report will be based on project complexity:
 - a. <u>Design Features</u>. These projects are major reconstruction or new construction type of improvements that may or may not involve an existing highway alignment or street. List and discuss the design guidelines used for the proposed improvement.
 - b. <u>Environmental Information</u>. Use the ECAD record form as a checklist to determine the potential project impacts. Most projects will be the Categorical Exclusion type or occasionally will require an Environmental Assessment type analysis. Include a summary and analysis of the environmental impacts.
 - c. <u>Public Involvement</u>. Include a summary and analysis of the comments and concerns received as a result of public involvement. One or two informational meetings should be held and an offer to hold a public hearing should be made.
 - e. <u>Estimate of Costs</u>. Provide cost estimates by usable segments, if applicable, or for an isolated project in accordance with the format in Section 12-4 and Chapter 65.

12-3.06 Project Reports

A Project Report documents a construction project which uses an existing alignment, roadway, and right-of-way or, possibly, some minor relocations. It could be prepared for a Federal or State-only funded project. These types of projects typically qualify as Categorical Exclusions and, therefore, the environmental documentation is included in the Project Report. Also, see Section 12-1.02. When preparing a Project Report, consider the following:

- 1. <u>Format</u>. The Project Report should have the following generalized format:
 - table of contents;
 - Project Report Approval Form (see Figure 12-5B);
 - text of report; and
 - exhibits (e.g., plan and profile sheets, aerial photograph, maps) located in the back of the report on 11 in x 17 in sheets. Designate each different exhibit as a "Figure" and, if figures are depicting the same information but at different locations, label each exhibit as Sheet ____(No.)_ of __(No.)__.
- 2. <u>Page Numbering</u>. Provide consecutively numbered pages for the report. Also, provide page numbers for all figures in the exhibit sections.
- 3. <u>Cross References</u>. Make cross-references between related areas and to figures contained in the exhibit section of the report.
- 4. <u>Content.</u> Information placed in a Project Report should reflect appropriate engineering and environmental investigations and should indicate compatibility with current Department criteria. The project study should meet the requirements for public involvement (Chapter 19), environmental analyses (Part III, Environmental Procedures), and engineering analyses (Section 11-2). Figure 12-3A provides an outline of the information, as applicable, that should be included in a Project Report. Also, review the items listed on the Fact Sheets for an Abbreviated Project Report as shown in Section 12-3.07.
 - Checklist. Section 12-3.09 provides a checklist that may be used to ensure all applicable project information, certifications, coordination, and other requirements are covered in the Project Report.

TABLE OF CONTENTS FOR PROJECT REPORT

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Title Sheet

Table of Contents

Project Report Approval Form (see Figure 12-5B)

I. NEED FOR IMPROVEMENT

- A. Project Location and Termini
 - 1. Functional classifications and local name(s)
 - 2. Regional location Note the project/route location with respect to other major routes, municipalities, and geographical markers
 - 3. Limits, county, municipality, maintenance jurisdictions (who owns road)
 - 4. Separate classifications (e.g., SRA, truck routes, NHS)
- B. Description of Existing Conditions
 - 1. Land use (along route and in project vicinity)
 - a. Residential, commercial, industrial
 - b. Historical sites
 - c. Schools, parks, forest preserves, etc.
 - 2. Existing Cross Section
 - Number of lanes, parking, shoulders and/or curb and gutter, sidewalk, median (type), and right-of-way (see Item VII. B. Typical Cross Sections); typical sections should also include pavement composition
 - b. Existing drainage (brief description of open/closed system and record of flooding)
- C. Operational and Safety Analyses
 - 1. Why project was initiated (need)
 - a. Safety concerns include brief crash summary (e.g., number of crashes, predominant crashes and causes, HALs)
 - b. Pavement condition
 - c. Operational concerns/capacity
 - d. Existing geometry and profile
 - e. Structural deficiencies
 - f. Local interest
 - 2. Relationship to other projects (past, current, future)
- D. Project Purpose/Identified Deficiencies (general statement)

Note: Table of Contents may be modified as necessary depending on the proposed improvement.

TYPICAL TABLE OF CONTENTS FOR PROJECT REPORT Figure 12-3A

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Page

II. DESCRIPTION OF PROPOSED IMPROVEMENT (only include items relevant to project)

A. Introduction

This section is not intended to be lengthy, but should include the following:

- 1. General scope of work
- 2. Relationship to the purpose and need for improvement

B. Design Criteria Utilized

Note design criteria (e.g., 3R, reconstruction) used in developing improvement. For example: Chapter 49 "3R Guidelines for Rural and Urban Highways"

C. Geometric Improvements

Include reasons for each of the following:

- 1. Typical roadway template (proposed cross section)
- 2. Intersections
- 3. Vertical alignment lower or raise the profile (safety and drainage)
- 4. Horizontal alignment correct sight distance problem/deficient curves, revise superelevation, correct broken back alignments, etc.
- 5. Unique considerations

D. Preliminary Pavement Design/Rehabilitation

- 1. Need for Geotechnical Survey
- 2. Documentation for pavement design or rehabilitation of pavement
- 3. Statement if cold milling is proposed

E. Pavement Drainage

- 1. Describe existing system and any proposed improvements
- 2. Reference Preliminary Drainage Study or Hydraulic Report, as applicable

F. Design Exceptions

Include all design exceptions/waivers as approved by BDE and/or FHWA. Typically, these are discussed and concurrence is received at district coordination meetings.

G. Right-of-Way

- 1. Acquisition required
 - a. Total parcels
 - b. Land use summary
 - c. Total area

TYPICAL TABLE OF CONTENTS FOR PROJECT REPORT Figure 12-3A

(Continued)

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- 2. Permanent easements required
 - a. Total parcels
 - b. Land use summary
 - c. Total area
- 3. Temporary easements required
 - a. Total parcels
 - b. Land use summary
 - c. Total area
- 4. Residential/business displacement (see Plan Sheets and Part III, Environmental Procedures, for discussion)
- 5. If no ROW acquisition is required, then include a statement to this effect.

H. Structures

This section is to be more detailed than Section I, Need for Improvement, and will function as a "quick-look" reference area (see Bridge Condition Report (BCR) and information listed in Abbreviated Project Reports):

- 1. Feature carried
- 2. Feature crossed and adjacent land use
- 3. Structure number
- 4. Existing structural deficiencies
- 5. Proposed scope of work and cross section (e.g., deck replacement, superstructure replacement, bridge removal/replacement, in-stream work, widening)
- 6. Vertical clearances deficient or the need for restrictions on resurfacing projects
- 7. Indicate whether foundation borings requested and/or completed. If completed, include in Project Report (supplement)
- 8. Include memo from Bureau of Bridges and Structures approving BCR
- 9. Reference coordination meeting with BDE for cross section concurrence
- I. Traffic Signal Modernization/Installation
 - 1. Location(s)
 - 2. Description of work (e.g., modernizing, interconnect, pre-emption, railroad crossing, installation)
 - 3. Reference signal warrants(s) met
 - 4. Local participation (e.g., construction costs, maintenance responsibility, maintenance costs, energy costs).

TYPICAL TABLE OF CONTENTS FOR PROJECT REPORT Figure 12-3A (Continued)

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J. Lighting

- 1. Existing conditions (Lighting Survey)
- 2. Maintenance responsibility
- 3. Proposed improvement
- 4. Funding responsibility

K. On-Street Parking

- 1. Existing conditions (e.g., parallel/diagonal, peak-hour restrictions, metered), include limits, municipality, and parking use (e.g., residential, commercial)
- 2. Proposed improvement Describe whether parking lanes are removed, replaced, resurfaced, reconstructed, or relocated
- 3. Local participation

L. Sidewalks/ADA Requirements

- 1. Existing conditions (e.g., width, continuous, location)
- 2. Proposed improvement (e.g., new, repair, width, location, local coordination, accessible for disabled persons)
- 3. Local participation
- 4. If no sidewalks exist and/or no new sidewalks requested, include statements to this effect

M. Bikeways/Trails

- 1. Note if route is a recommended road bicycle route or if there is another recommended (alternative) route in the proximity of the improvement
- 2. Existing trails in the proximity of the improvement
- Bicycle generators in the area
- 4. Local coordination to determine any planned facilities
- 5. How project addresses bicycle usage (include specific improvements such as wider lanes, separate path, etc.)
- 6. If the improvement does not accommodate bicycle use, then complete the Bicycle Checklist as discussed in Chapter 17

N. Pedestrian Overpass/Subways/Other Facilities

- 1. Existing Describe pedestrian generators, crashes, and other features that would necessitate a grade separated pedestrian facility
- 2. Proposed Discuss proposed work and how it will accommodate pedestrians and provide benefits (e.g., safe access to parks/schools/public facilities/ commuter stations/bus stops, aesthetics, safety)

TYPICAL TABLE OF CONTENTS FOR PROJECT REPORT Figure 12-3A (Continued)

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O. Mass Transportation

- 1. Existing services (e.g., bus, train, shuttle (include route numbers))
- 2. Describe existing facilities (e.g., pedestrian accessible, park and ride lots, kiss and ride locations, commuter stations, bus stops (near side/far side))
- 3. Will project improve access to mass transportation (e.g., bus turnouts, bus pads, shelters, signal work)

P. Utility Conflicts

- 1. Identify utilities that were contacted and those that responded to having facilities within the project limits
- 2. Describe conflicts with these utilities due to the proposed improvement (e.g., changes in horizontal and vertical alignment, widening, replacement of bridge deck or superstructure, trenching, boring for conduits, storm sewer)

Q. Encroachments

- 1. Existing (e.g., illegal parking, ROW infringements)
- 2. Proposed remediation of encroachments
- 3. Reference letters sent to property owner about encroachments

R. Mail Delivery

- 1. Type of drop-off (e.g., locations, door-to-door, streetside)
- 2. Hazardous mailbox supports (reference letters sent to property owners); see Chapter 58
- 3 Improvement's impact on mail delivery (need to contact local postmaster)
- 4. Mailbox turnouts (shoulder section versus curb and gutter); see Chapter 58

S. Landscape/Roadside Development

- 1. Note all areas disturbed by construction to be restored to turf cover
- 2. Note all tree and other plants removed for construction and which will be replaced; see Chapter 59
- 3. Summarize the results of the vegetation assessment survey

T. Erosion Control

If soil is exposed to displacement, include erosion control documentation; see Chapter 59

TYPICAL TABLE OF CONTENTS FOR PROJECT REPORT Figure 12-3A (Continued)

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U. At-Grade Railroad Crossings

- 1. Location and rail line (e.g., Union Pacific, Wisconsin Central, CTA "L").
- 2. Existing conditions
 - a. railroad crossing flashers, gates, and pedestrian gates
 - b. proximity of train stations or stops
 - c. number of tracks and alignment of crossing
 - d. crash history at crossing
- 3. Proposed improvement In addition to roadway work, include the results of the coordination with the Railroad Unit to determine proposed improvements (e.g., rail replacement, rehabilitation, changes in gate/flasher (preemption) timing).
- 4. Train interruptions/detour routes
- 5. Proximity of traffic signals and preemption. Include results of discussions with the district Bureau of Operations to identify signal sequence and preemption at the crossing. Describe existing (or the need for) near side traffic signals that stop traffic in advance of the crossing; see Section 36-8.
- 6. Coordination with Illinois Commerce Commission

V. Surveillance

- 1. Existing surveillance within or in the proximity of the proposed improvement (e.g., changeable message signs, detector loops, volume/speed loops, video detection/monitors)
- 2. Proposed surveillance for the improvement
- 3. Results of coordination with the district Bureau of Operations (Bureau of Traffic, District 1), where necessary

W. Pump Stations

The electrical requirements associated with pump stations are determined and designed by the Bureau of Electrical Operations (District One) and Bureau of Operations in other districts. The roadway collection system, pump capacity, pump discharge, storm water storage, and outlet evaluation are detailed in the Hydraulics Report prepared by the Hydraulics Unit in the district. For this section of the Project Report, provide the following general information, while referencing the Hydraulics Report for the more detailed, technical information:

- pump station number and location,
- roadway limits that are drained by the pump station,
- outfall location, and
- proposed improvements as directed by Hydraulics Unit.

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X. Retaining Walls

- a. Existing retaining walls within and/or affected by the improvement.
- b. Proposed retaining walls that are required as a result of improvement (e.g., profile adjustments, regrading near bridge abutments, sidewalk separations). Walls over 10 ft (3 m) high are either designed by Bureau of Bridges and Structures or the design is reviewed by Bureau of Bridges and Structures.
- c. Provide information on length and height (exposed) so that the design squad can determine need for consultant services.
- d. Indicate whether foundation borings requested/completed. If completed, include as supplement.

III. ENVIRONMENTAL SURVEY SUMMARIES

For documentation requirements in the Project Report, see Section 12-3.09.

IV. TRAFFIC MANAGEMENT ANALYSIS AND RECOMMENDATIONS

See Chapters 13 and 55 to determine type and cost of traffic management for proposed improvement.

V. ESTIMATE OF COSTS

See Section 12-4 and Chapter 65 for details on cost estimates for Project Reports.

VI. COMMITMENTS

- A. Environmental (e.g., permits, restricted areas, tree cutting, wetland mitigation)
- B. Property owner/local/forest preserve/transit company
- C. Other agencies (e.g., IDNR, Agriculture, U.S. Army Corps of Engineers)

These commitments require review by the Project and Environmental Studies Section Chief and by the Environmental Unit Head in District 1 and by the Project Engineer and Environment Studies Supervisor in other districts. Discuss these commitments with Phase II design squad and with construction personnel.

VII. EXHIBITS

- A. Location Maps
- B. Typical Cross Sections

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- C. Traffic Diagrams of Overall Street Network
- D. Existing Conditions (Aerial Photography)
- E. Proposed Conditions (Plan and Profile Sheets in 11 in x 17 in format)
- F. Approved Intersection Design Studies (Reduce to 11 in x 17 in format)
- G. Overall Schematic of Horizontal Control and Curve Data
- H. Vertical Curve Data

VIII. COORDINATION/DOCUMENTATION

Provide copies of correspondence, coordination, minutes of meetings, and a summary of public involvement needed and completed.

- A. Environmental Correspondence/Permits
- B. Metro/State Clearinghouse Signoffs
- C. District Coordination Meeting Minutes
- D. Coordination
 - 1. Municipalities/counties
 - 2. Parks and forest preserves
 - 3. Mass transit agencies
 - 4. Other agencies (utilities, railroads, etc.)
- E. Public Involvement
 - 1. Property owner letters or contacts
 - 2. Other correspondence
 - 3. Summary of Informational Meetings/Public Hearings

IX. TECHNICAL REPORTS

- A. Air Quality
- B. Noise/Construction Noise
- C. Crash Analysis
- D. Vegetation Assessment/Survey
- E. Bridge Condition Report
- F. Geotechnical Survey
- G. TMA Report
- H. Other

X. PRELIMINARY DRAINAGE STUDY

If needed, prepare as a separate technical report.

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12-3.07 Abbreviated Project Reports

For some 3R type projects and replace-in-kind reconstruction projects, an Abbreviated Project Report format may be used to document the results of a Phase I engineering study. This format eliminates considerable writing and provides an easy-to-follow checklist, fill-in-the-blanks, and attachments type report.

Only use an Abbreviated Project Report when the environmental and engineering impacts of a project can be adequately described by completing the Fact Sheet and by use of attachments. However, if the project information as described in Part III, Environmental Procedures, requires the preparation of a narrative type report for adequate coverage, then use the Project Report format described in Section 12-3.06.

The recommended format of an Abbreviated Project Report can be found in the following figures as applicable:

- Figure 12-3B, Fact Sheet (Roadway Improvement); and
- Figure 12-3C, Fact Sheet (Total Structure or Superstructure Replacement).

As an exhibit, include a copy of the applicable district coordination meeting minutes. This documentation describes the proposed improvement and lists the decisions made at those meetings. A typical example of these meeting minutes is shown in Figure 12-3D.

ABBREVIATED PROJECT REPORT ILLINOIS DEPARTMENT OF TRANSPORTATION

1.	PPS (Project Planning System) No.: _		
2.	Contract No.:		
3.	State Job No.:		
4.	Highway Functional Classification:		
5.	Truck Route Classification:		
6.	Type of Improvement:	W & RS	or RS
	If other type of improvements, attach d	lescription:	
7.	Proposed Project Funding (Must be co	mpatible with sele	cted design guidelines.):
8.	Current ADT:	% Trucks in	n ADT:
9.	Surrounding Land Use:		
10.	Existing Right-of-Way Width:		Proposed:
11.	Existing No. of Lanes:		Proposed:
12.	Existing Roadway Width:		Proposed:
13.	Existing Traveled Way Width:		Proposed:
14.	Pavement Surface Condition (CRS): _		(Year):
15.	Existing Shoulder or Curb Type:		Proposed:
16.	Existing Clear Zone Width:		Proposed:
17.	Describe existing conditions or prop limits:	osed highway im	provements adjacent to projec
18.	Are there any bridges in this constructi remain in place? Yes each bridge in this segment and when	No. Give desci	ription of what must be done to
19.	What has the field check indicated for and other safety work:		•

FACT SHEET (Roadway Improvement)
Figure 12-3B

	Use a straight-line diagram or schematic plan to indicate proposed work including culvert extensions, guardrail, etc.				
20.	Will ditch cleaning be necessary with this improvement?YesNo				
21.	What has a review of crash data shown?				
22.	Existing Rural Posted Speed: Urban Posted Speed:				
23.	Proposed Rural Design Speed:				
	Proposed Urban Design Speed:				
24.	Check design policy used:				
	 3R criteria for arterial highways and bridges for other than expressways and freeways on the Federal-aid Highway System (See Chapter 49) 3R criteria for highways and bridges on unmarked routes of the State Highway System (See Chapter 49) 				
	Other (list):				
25.	List and indicate reasons for any design exceptions:				
	Does existing highway geometry meet IDOT criteria?				
	Horizontal: Yes No				
	Vertical: Yes No				
	If "No" is checked, discuss what will be done:				

FACT SHEET (Roadway Improvement)

Is resurfacing thickness in accordance with Department pavement rehabilitation criteria

	(see Chapter	53)?				
	Yes	No; Reason(s	s)			
26.	How will traff	ic be maintained during	construction?			
27.	RR Data:	Trains/Day	_ # Tracks _	Speed	I of Trains	
28.	RR Crossing	Protection: Existing: _		Changes Proposed:	Yes	No
29.	Type of prop	osed improvements at F	RR crossing: _			
30.	Sidewalks:	Existing:		Proposed:		
31.	Parking:	Existing:		Proposed:		
32.	Will signals b	e installed or modernize	ed?			
33.	Lighting:					
34.	Utilities/Encre	oachments:				
35.	Drainage (flo	od plain, detention, floo	ding over the	roads, etc.):		
36.	Any Section	4(f) sites on Federal-aid	l projects?	-	Yes	No
37.	Is an environ	mental survey request i	required by De	epartment policy? _	Yes	No
38.	Clearinghous	se Sign-Off for Federal-	Aid Projects:			
			State:		Date:	
			Metro:		Date:	
39.	If applicable,	Metropolitan Planning	Organization a	pproval date:		
40.	Permit Status	s (Sections 404, 402, ar	nd 10 Permits,	401 Certification, e	etc.):	
4	1. Have any spe	ecial erosion control or	tree retention	commitments been	made?	
	Yes	No				
	If yes, has the	e district Landscape Ard	chitect/Special	ist reviewed the co	mmitments?	
	Yes	No				
42.	If soil is expense.	osed to displacement,	include erosio	on control documer	ntation (see C	hapter

FACT SHEET (Roadway Improvement)

43.	Road	Roadway Exhibits:		
	•	Completed Estimate of Costs (see Figure 12-4B):		
	•	IDOT TIP Sheet:		
	•	Location Map and Aerial Photography (use 11 in x 17 in format): .		
	•	Profile Gradelines of Existing Alignment, Any Corrections, and Topographic Mapping for Alignment and Profile Changes:		
	•	List of Existing Horizontal Curvature From Road Plans and		
		Superelevation Rates From Field Check (if applicable):		
	•	Typical Roadway Cross Sections (existing and proposed):		
	•	BDE Approval Memorandum on Resurfacing Thickness Deviation (if applicable):		
	•	Crash Analysis and Schematic Drawing of Crashes		
		(Collision Diagram) for Previous Three Years:		
	•	Wet-Weather Skid Crash Analysis:		
	•	Resolution of Any Encroachments on ROW:		
	•	Archaeological/Biological Sign-off (where applicable) or Evidence of the Results of Surveys and Related Coordination:		
	•	Noise Statement for Projects with Alignment Changes or Noise Abatement:		
	•	Coordination and US Army Corps of Engineer, Section 404 Permit Status If Bridges are Involved:		
	•	Route Improvement Plans for Adjacent Districts:		
	•	Agency Coordination Letters:		
	•	Utility Coordination:		
	•	District Coordination Meeting Minutes (See Figure 12-3D):		
	•	Public Involvement Comments and Responses (if applicable):		
	•	Discussion of Mailbox Supports:		
	•	List Commitments with Discussion of Each:		
	•	Airport Clearance Coordination (if applicable):		
	•	Drainage/Hydraulic Reports (summary):		
	•	Approved Intersection Design Studies:		
	•	TMA (Traffic Management Analysis) Report and Approval		
		Memorandum:		

FACT SHEET (Roadway Improvement)

ABBREVIATED PROJECT REPORT ILLINOIS DEPARTMENT OF TRANSPORTATION

1.	PPS (Project	Planning System) No.:				
2.	Contract No.:					
3.	State Job No	.:				
4.	Highway Fun	ctional Classification:				
5.	Truck Route	Classification:				
6.	Is project elig	ible for HBRRP funds?		Yes	No	
7.	Current ADT:		% Truck	s in ADT:		
8.	Name of Stre	am or Crossing:				
9.	Surrounding	Land Use:				
10.	Existing Appr	oach Roadway Width:		Prop	osed:	
11.	Existing Trav	eled Way Width:		Prop	osed:	
12.	Existing Shou	ılder Type:		Prop	osed:	
13.	Existing Shou	ulder Width:		Prop	osed:	
14.	Existing Clea	r Roadway Bridge Width:		f-f Prop	osed:	f-f
15.	Are sidewalk	s warranted? Y	es _	No		
16.	Existing Post	ed Speed:				
17.	Proposed Ru	ral Design Speed:	Propo	sed Urban	Design Sp	eed:
18.	Check Design	n Policy Used:				
		3R criteria for arterial his expressways on the Fede	•	•		n freeways and
		3R criteria for highways Highway System (see Ch	•	s on unma	arked route	es of the State
		Other (List):				
19.	Does existing	highway geometry meet l	DOT criteria	?		
	Horizontal: _	Yes No	o (discuss):			
	Vertical:	Yes No	o (discuss):			

FACT SHEET
(Total Structure or Superstructure Replacement)
Figure 12-3C

	List and indicate reasons for any design exceptions:				
	proposed bridge widths within adjacent road	and alignment compatible with existing and way sections assuming logical segments?			
		e:Yes No, Discuss:			
	Is channel work required? Yes	No			
ļ	Hydraulic Information or Attach Waterway Table (where applicable).				
;	a. Drainage Area:	acres (hectares)			
I	b. Existing Opening:	sq ft (m²)			
(c. Required Opening:	sq ft (m ²)			
(d. Proposed Opening:	sq ft (m ²)			
(e. Q():	cu ft/s (m ³ /s)			
	Discuss Results:				
	Has Bureau of Bridges and Structures co Bridge Condition Report? Yes	oncurred in Proposed Bridge Drawings and			
-	Has District Bridge Engineer made a recent Yes No	field inspection of abutments and piers?			
(Comments on Field Check:				
	Is an environmental survey request required	by Department policy?YesNo			
;	a. Any Wetlands Involved in Reconstruc	ction: Not Applicable:			
l	b. 4(f)/106 Involved on Federal-aid Proj	ects: Not Applicable:			

FACT SHEET (Total Structure or Superstructure Replacement)

	c. Illinois Department of Natural Reso	urces, Office of Water Resources:			
	Status of Flood Plain Permit:	Not Applicable:			
29.	Are Sections 404, 402, and 10 Permits an work, runaround detours, etc.? Ye	•			
30.	Status of Other Permits (see Chapter 28):				
31.	Is this a historic bridge?Yes	_ No			
32.	If applicable, Metropolitan Planning Organ	ization approval date:			
33.	Clearinghouse Sign-Off for Federal-Aid Pro	ojects:			
	State:	Date:			
	Metro:	Date:			
34.	What method will be used to detour or maintain traffic during construction (Traff Management Analysis Report)?				
35.	Have any special erosion control or tree retention commitments been made?				
	Yes No				
	If yes, has the district landscape architect/s	specialist reviewed the commitments	s?		
	Yes No				
	If soil is exposed to displacement, includ 59).	e erosion control documentation (s	ee Chapter		
36.	Structure or Superstructure Replacement I	Exhibits:	Page No.		
	 Completed Estimate of Costs (See Concurrence Letter for Funding Pa IDOT TIP Sheet: Location Map and Aerial Photograp 	rticipation:			
	 Profile Gradeline of Existing Alignment Topographic Mapping for Alignment List Existing Horizontal Curvature Form Field Check 	nt and Profile Changes:			

FACT SHEET (Total Structure or Superstructure Replacement)

•	Typical Roadway Cross Sections (existing and proposed):
•	Typical Section Existing Structure:
•	Proposed Bridge Drawings and Memorandum Approving Each
	Bridge Condition Report(s):
•	Color Photographs of Existing Bridge(s):
•	Other Items for Approach Roadway (if applicable):
•	Crash Analysis Schematic Drawing of Crashes
	(Collision Diagram) 0.5 miles (800 m) on Each Side of Bridge:
•	Wet-Weather Skid Crash Analysis:
•	Resolution of Any Encroachments On ROW:
•	Archaeological/Biological Sign Off (where applicable), or
	Evidence of the Results of Surveys and Related Coordination:
•	Noise Statement for Projects with Alignment Changes or Noise
	Abatement:
•	Coordination With U.S. Army Corps of Engineer, Section 404
	Permit Status:
•	Agency Coordination Letters:
•	Utility Coordination:
•	District Coordination Meeting Minutes (see Figure 12-3D):
•	Public Involvement Comments and Responses (if applicable):
•	List Commitments With Discussion of Each:
•	Airport Clearance Coordination (if applicable):
•	TMA (Traffic Management Analysis) Report and Approval
	Memorandum:
•	Drainage/Hydraulic Reports (summary):

FACT SHEET (Total Structure or Superstructure Replacement)

ILLINOIS DEPARTMENT OF TRANSPORTATION

COORDINA	ATION MEE	TING MINUTES		TOPIC NO. 9	
DISTRICT	3 CONFERI	ENCE ROOM			
DATE OF N	MEETING:	January 29, 1998	FUNDING SOURCE:	STP	
ROUTE:		FAP 41			
MARKED F	ROUTE:	Illinois 17	DESIGN GUIDELINES USED:	3P	
LOCAL NAME: N/A		N/A	FUNCTIONAL CLASSIFICATION:		
			East of CH 6 - Urban Other Principal Arterial		
			West of CH 6 - Rural Mind	or Arterial	
SECTION:		(11, 12) RS-3	DESIGN SPEED:	55 mph (90 km/h)	
COUNTY:		Kankakee	POSTED SPEED:	55 mph	
ADT:	Herscher F	Rd. to Warner Bridge	Road - 3,850/1997/10.4		
	Warner Bri	idge Road to Kankak	tee City Limits - 9,400/1997/5.4		

- 1. **LIMITS OF PROJECT:** The project begins approximately 0.75 miles (1.2 km) east of Herscher Road and extends east approximately 9.13 miles (14.7 km) to the west Kankakee city limits.
- 2. PREVIOUS DATES OF DISCUSSION: None
- **PROJECT DESCRIPTION:** The length of roadway to be improved is approximately 9.13 miles (14.7 km). It was originally constructed in 1924 to a width of 18 ft (5.5 m) with a pavement design of 9 in-6 in-9 in (229 mm-152 mm-229 mm) portland cement concrete and earth shoulders.

In 1961, the roadway was widened to 24 ft (7.32 m) with 9 in (229 mm) portland cement concrete and overlaid with 3.25 in (82 mm) of bituminous asphalt. In 1975, bituminous shoulders 9 in (229 mm) at a width of 1.5 ft (457 mm) were added to each side and the entire roadway given a bituminous overlay of 3 in (76 mm) and aggregate shoulders. In 1986, the shoulders were widened an additional 1.5 ft (457 mm) with 6 in (152 mm) of bituminous concrete to allow for a bituminous shoulder of 3 ft (914 mm). Turn lanes of 12 ft (3.66 m) were also constructed at Lehigh and Limestone Roads with 9 in (229 mm) of bituminous base course. The existing roadway was cold milled 0.625 in (16 mm) and the entire roadway was given a bituminous overlay of 2 in (51 mm). Aggregate shoulders 5 ft (1.52 m) were also added.

The proposed improvement includes a bituminous concrete overlay of 0.75 in (19 mm) leveling binder and a bituminous concrete overlay of 1.5 in (38 mm) surface course. A 5 ft (1.5 m) aggregate wedge will also be placed. Mr. John Doe of the Bureau of Design and Environment concurred with the scope of work and with the project being processed as a Group I Categorical Exclusion.

- 4. TRAFFIC CONTROL: This project will be constructed using applicable traffic control standards with one lane open to traffic at all times during construction.
- **REVIEW OF CRASH DATA:** A total of 102 crashes have occurred on this segment of Illinois Route 17 from January 1993 to December 1995. The highest crash pattern was in clear and dry conditions (69 percent). The most common type was animal related (28 percent). No high accident locations (HAL) or wet weather clusters were noted in the project limits.
- 6. **EXPLANATION OF DESIGN EXCEPTIONS:** No exceptions required.
- 7. ENVIRONMENTAL ACTIONS DESIRED:

 - NATIONWIDE 404 PERMITS: N/A ENVIRONMENTAL SURVEY REQUEST: N/A
 - CATEGORICAL EXCLUSION: Group I Concurred 1-29-98
- 8. ADDITIONAL RIGHT-OF-WAY NEEDED: N/A
- ATTACHMENTS: Location Map(s) attached.

EXAMPLE OF DISTRICT MINUTES (Coordination Meeting Minutes)

Figure 12-3D

12-3.08 3P and SMART Projects

12-3.08(a) Report Format and Content

To assist the districts in documenting 3P and SMART improvements, see Figures 12-3E and 12-3F, respectively. An important aspect of 3P and SMART improvements is the discussion and presentation of these projects at district coordination meetings. The use at coordination meetings provides the means to discuss design exceptions, how High Accident Locations (HAL) will be addressed, and the need for additional right-of-way. Also, see Section 12-1.02 for further information on 3P and SMART Reports and Chapter 53 for further design details on pavement resurfacing.

After the completed report is signed, transmit a copy of the checklist report plus any attachments to BDE for information and project documentation. In almost all cases, the District Engineer will approve these projects.

12-3.08(b) High-Accident Locations (HAL)

For improvements other than added through lanes; the addition of two-way, left-turn lanes; an intersection improvement; or those involving prohibitive right-of-way, every effort should be made to incorporate HALs into the design of 3P and SMART projects. The following discusses when to incorporate a HAL into a 3P or SMART project and still fund the entire improvement.

There are two levels of HAL investigations and analysis that determine a HAL's impact on a resurfacing improvement. Figure 12-3G may be used to assist in making these determinations. Each investigation and analysis requires engineering judgment and the documentation of conclusions. Also, examine and analyze the following:

- frequency of crashes;
- severity of crashes;
- crash rate;
- delta change;
- predominate type of crashes;
- type of area;
- pertinent history of past improvements;
- an event near or at the location which might have contributed to HAL;
- existing geometrics (e.g., alignment, roadway width, ROW, turn lanes); and
- results of capacity analysis.

If it is determined not to incorporate a HAL into the resurfacing improvement, the HAL must be either an isolated occurrence, or the HAL must be considered not to be correctable as part of the resurfacing project.

To incorporate a HAL into a 3P or SMART project, the HAL must be considered to be recurring when:

- it has been on the HAL list for two out of the last three years; or
- where in the first year on the HAL list, an analysis determines that there is a potential for recurrence (not an isolated occurrence).

When there is a question whether or not a HAL is an isolated occurrence, the district should postpone any improvement to see if it reappears on the next year's HAL listing.

ILLINOIS DEPARTMENT OF TRANSPORTATION

			Project Engineer:	
Kev F	Route:	Section:	County:	
			Marked Route:	
			Program Estimate:	
			 Program No.:	
			Project Length	
CRS/	Year:	Total ADT/Year:	Truck AD	Γ/Year:
			Crash Rate/Statewide /	
			e(km): HAL (
			Width: No. of Th	
			: Proposed Shldr	
	_		xisting Pavement Type:	
Propo	osed Resurfacing Thic	ckness:	Exception to Policy: No	Yes. If yes, has
			n obtained? Yes	
Perce	ent Patching Proposed	d:		
	er the following items plain the answer:	Yes or No or fill in the t	olanks. If marked yes, an atta	chment may be necessary Yes No
1a.	Is improvement on th	ne National Highway Sys	stem (NHS)?	<u></u> _
1b.				
2.	Any design exception	ns required? (Attach mi	nutes of coordination meeting)	
3.			nd gutter type: length	
3a.	Do gutter sections ex	kist in rural areas? If yes	s, attach explanation for resurf	
4.	Are ramps for disable	ed persons proposed at	intersections?	
5.	Do sidewalks exist?	Existing width:		
6.				
7.	Do bike lanes exist a	long street or on should	er? (Attach explanation)	
8.	Is bike lane resurfaci	ng proposed?		
9.	Are new bike lane ac	commodations propose	d? (Attach cross section and	
10.	Is local agency involved	ved with project? If yes,	name of agency:	
10a.	Is agency notified or	agreement signed/pend	ing?	
11.	Do parking lanes exis	st within project limits?		
11a.	If yes, is local participation	oation secured?		<u> </u>
12	Does navement floor	ding oviet?		

PAVEMENT PRESERVATION PROJECT (3P) REPORT Figure 12-3E

13.	Do storm sewer inlets need repairing or replacement?
14.	Do drainage problems exist?
15.	Is cold milling of old surface proposed? Reason:
16.	Are geometric revisions required? (Attach description for this design exception)
17.	If HALs exist, can they be corrected by resurfacing or by a superelevation improvement?
18.	Is 3R Spot Improvement proposed to correct HAL?
	(If yes, attach analysis and coordination meeting minutes)
19.	Number of intersections that may require improvements within next 10 years:
20.	Structure numbers of bridges within project limits that may need improvement within next 10 years:
21.	Is bridge resurfacing proposed? No Yes (Attach BB&S concurrence)
22.	Project discussed and reviewed at coordination meeting on:
23.	Other comments:

PAVEMENT PRESERVATION PROJECT (3P) REPORT Figure 12-3E

(Continued)

CATEGORICAL EXCLUSION STATEMENT (Check one and provide information indicated)

	Group I		
		as a Categorical Exclusion Action. It has been Circumstances. Therefore, it is eligible to be pro-	
	Design Approval by:	neer of District	Date
	*Design Exception Approval (if applicable): Bureau of Desig	gn and Environment - Regional Field Engineer	Date
	Group II		
	Unusual Circumstances. Group II Cated	involve one or more of the factors indicating a F gorical Exclusion concurrence for this project wa E (for non-federal projects) on ached."	as obtained
	*Bureau of Design & Environment Approval (if applicable):	Regional Field Engineer	Date
	FHWA Concurrence (if applicable):	FHWA Representative	Date
	District Approval (if applicable):	District Engineer of District	Date
*See		Coordination Meeting Minutes.	

PAVEMENT PRESERVATION PROJECT (3P) REPORT (Approval Form)

ILLINOIS DEPARTMENT OF TRANSPORTATION

			Projec	ct Engineer:		
			Desig	ner:		
	Key Route:	Section:		County:		
	Functional Classification:					
	Termini:					
	Project Length:					
	Contract No.:					
	State Job No.:	=		=		
	Fund Year:					
	CRS:					
	CRS:					
	CRS:			Distresses:		
l	For Marked Routes, CRS ≥ 5.0					
I	Total ADT/Year:					
Ì	No. of High Accident Locations					
1	Total Cost Estimate:					
Ì	Total Cost of Items 2a – 2e					
1	Existing Rdwy Width: Exist. Median Type & Width: No. of Thru Lanes:					
	Existing Shldr Width:	_ Exist. Shldr T	ype:	Proposed Shldr Type:	:	
	Existing Pavement Width:					
	Proposed Resurfacing Thicknes	s:	_ Except	tion to Policy: Y/N		
	If yes, Has Bureau of Design and Environment Approval Been Obtained? Y/N (Attach copy)					
	Percent Patching Proposed:					
Ì	If MU ADT is less than 250, is pa	atching <u><</u> 6%: \	//N If MU	ADT 250 - 500, is patchi	ing <u><</u> 5%: Y	′/N
	Answer the following items Yes	or No or fill in th	e blanks. If ma	rked yes, an attachment r	may be ned	cessary
	to explain the answer:				V	N
	de la improvement en the Nie		2ata .a. (NILIO)2		Yes	
	1a. Is improvement on the Na	• •	. ,		·	
	1b. Is highway a designated t					
ı	2. Any design exceptions rec			•,		
		2a. Spot guardrail updates or repairs 2b. Minor spot drainage improvements				
	-	· · · · · · · · · · · · · · · · · · ·				
	_					
l	2e. Isolated entrance culvert i	•			·	
	3. Is local agency involved w					
	3a. If yes, name of agency		Agency nouned	or agreement signed/pen	uilly	

SMART PROJECT REPORT

Figure 12-3F

4.	Are curb repairs necessary? Existing curb and gutter type: Length:
5.	Do sidewalks exist? Existing width:
6.	Are ramps for disabled persons proposed at intersections?
7.	Do parking lanes exist within project limits?
7a.	If yes, is local participation secured?
8.	Do drainage problems exist?
9.	Do storm sewer inlets need repair or replacement?
10.	Is cold milling of old surface proposed?
10a.	If yes, reason for milling:
11.	Is reflective crack control proposed?
11a.	If yes, have CRS distress requirements been reviewed?
12.	Are detector loops or traffic counters present?
13.	Are geometric revisions required? (Attach description for this design exception)
14.	If HALs exist, can they be corrected by resurfacing or by a superelevation improvement?
15.	Is 3R Spot Improvement proposed to correct HAL?
	(If yes, attach analysis and coordination meeting minutes)
16.	Structure numbers of bridges within project limits that may need improvement within next 10 years:
17.	Is bridge resurfacing proposed? Y/N (Attach BB&S concurrence.)
18.	Project discussed and reviewed at coordination meeting on:
19.	Other comments:

SMART PROJECT REPORT

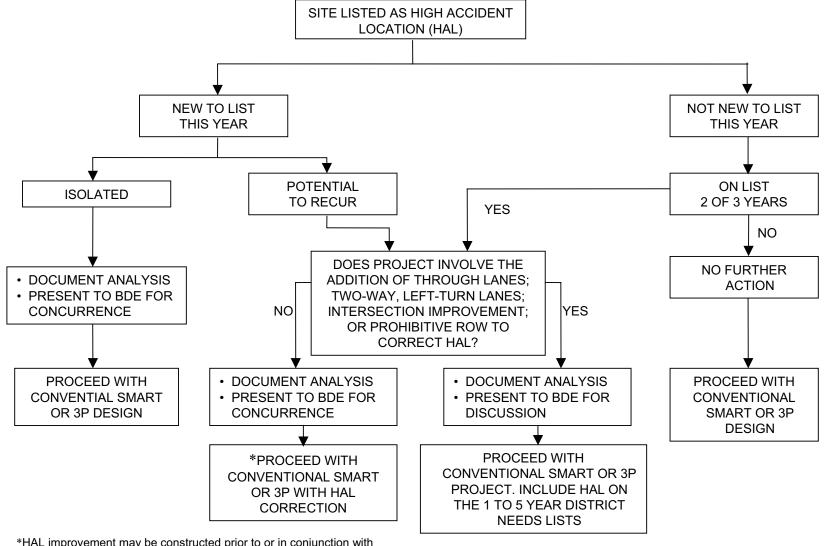
Figure 12-3F

(Continued)

CATEGORICAL EXCLUSION STATEMENT (Check one and provide information indicated):

	Group I		
		s as a Categorical Exclusion Action. It has been of Circumstances. Therefore, it is eligible to be pro	
	Design Approval by:	ineer of District	Date
	*Design Exception Approval (if applicable): Bureau of Des	ign and Environment - Regional Field Engineer	Date
	Group II		
	"It has been determined this project will involve one or more of the factors indicating a Potential for Unusual Circumstances. Group II Categorical Exclusion concurrence for this project was obtained from the FHWA (for federal projects)/BDE (for non-federal projects) on Documentation of the concurrence is attached."		
	*Bureau of Design & Environment		
	Approval (if applicable):	Regional Field Engineer	Date
	FHWA Concurrence (if applicable):	FHWA Representative	Date
	District Approval (if applicable): Date	District Engineer of District	
See _	Date	Coordination Meeting Minutes.	

SMART PROJECT REPORT (Approval Form)



*HAL improvement may be constructed prior to or in conjunction with the 3P or SMART Project. If in conjunction with, use separate pay items for the HAL improvement for later evaluation of costs.

GUIDANCE TO INCLUDE HAL INTO 3P OR SMART PROJECTS Figure 12-3G

12-3.09 Checklist for Phase I Reports

Figure 12-3H presents a checklist which may assist in the preparation of Phase I reports. It ensures that all applicable project information, certifications, coordination, and other requirements are covered in the report. The chapter and section references are for the *BDE Manual* unless noted otherwise. For any topic that does not apply, enter NA in the blank.

This checklist may be included in a Phase I report or with the information submitted with the request for design approval or District Engineer approval.

1.	Discussion at District Coordination Meeting (S	See Section 19-1).	
	If project was discussed at one or more distrinclude a copy of the pertinent parts of the me		
		Date(s) discussed: See Exhibit(s):	
2.	State Clearinghouse Coordination (See Section 2)	<u>on 19-1)</u> .	
	Required on projects eligible for Federal fund	ing that meet any of the following criteria:	
	 involves upgrading of an existing facility of consisting of more than 3R or modernizated. changes the use, scope, or intensity of use requires additional right-of-way; involves potentially significant social, econorequires a Federal license or permit. 	e of existing facilities;	
	Early Warning Notice Design Stage Sign-off	Date Submitted: Date Submitted: Date Received:	
3.	Environmental Survey Request (See Section	<u>27-1)</u> .	
	 Required for any project involving: additional ROW or easements; drainage structure runaround or any in-stress potential effect on a known wetland, relocation where a State or Federal-listed Total 	ecognized natural area/nature preserve, or	
	Also required for all borrow/contractor-use areas and for certain proposed access contro revisions for freeways on the State highway system.		
	Survey Request Form	Date Submitted:	
	Survey Results/Clearance for: Cultural Resources	Date Received:	
	Biological Resources	Date Received:	

CHECKLIST FOR PHASE I REPORTS
Figure 12-3H

Wetlands Resources

See Exhibit:

Prescreening results:

4.

5.

Date Received:

4.	IDNR Prescreening for Endangered and Threatened Species (See Section 22-5).
	Required for projects involving other than agricultural cropland or urban properties whe

the projects will involve acquisition of additional right-of-way or easements; impacts to known locations involving State-listed species or natural areas within existing right-of-way or proposed borrow/contractor use areas.

	See Exhibit:	
Consultation process terminated?	Yes	No
Coordination with IDNR (See Section 22-5	<u>5)</u> .	
Required for involvement with any of the fo	ollowing:	
 Wetlands (see Topic #17) Threatened and Endangered Spect Streams (includes Class I streams Forest/Trees (the bisecting of a for Prairie/Savanna Areas IDNR Properties Nature Preserves/Natural Area In Water Reserves (RLWR) 	and their riparian correst or removal of a sig	idor) Inificant number of trees)
IDNR response re: Streams, Forest/Tre Nature Preserves/INAI sites or RLWR site	•	Areas, IDNR Properties
	Date: See Exhibit:	

Coordination with US Fish and Wildlife Service for Federal Lands(See Section 22-5). 6.

Required for involvement with Federal Lands—primarily those areas in the Shawnee National Forest.

USFWS Response re: Federal Lands: See Exhibit:

CHECKLIST FOR PHASE I REPORTS

7.	Section 4(f) Evaluation (See Section 26-2).		
	Required for use of land from a significant publicly owned park, recreational area, wildlife and waterfowl refuge, or any land from a significant historic site.		
	FHWA 4(f) Approval:	Date:See Exhibit:	
8.	Section 6(f) Land and Water Conservation (LAV (See Section 26-3).	VCON) Fund Act Conversion Request	
	Required when lands that have LAWCON funds involved in their purchase or development will be converted to other than public outdoor recreation uses.		
	NPS 6(f) Conversion Approval:	Date:	
9.	Open Space Land Acquisition and Developmen (See Section 26-4).	t (OSLAD) Land Conversion Request	
	Required when lands that have OSLAD funds involved in their purchase or development will be converted to other than public outdoor recreational uses.		
	IDNR OSLAD Conversion Approval:	Date:See Exhibit:	
10.	Section 106 (National Historic Preservation Act) Compliance (See Section 26-5).		
	Required when sites on or eligible for the Nationaffected.	nal Register of Historic Places will be	
	Compliance Documentation:	Date:	
11.	Historic Bridge Compliance (See Section 26-5).		
	Required when bridge on the Historic Bridge Survey (HBS) is involved.		
	Compliance Documentation:	Date:	

12.	State Historic Act Compliance (See Section	<u>26-5)</u> .	
		nvolves impacts to site(s) listed on the Illinois eligible for the National Register of Historic	
	Compliance Documentation:	Date:See Exhibit:	
13.	Flood Plain Encroachment Studies (See Se of the IDOT Drainage Manual).	ection 26-7 of BDE Manual and Section 3-004	
	Required for Federal or State funded project plains as discussed in the cited references.	cts that would involve encroachments in flood	
	Flood Plain Encroachment Studies:	See:	
14.	Flood Plain Finding (See Section 26-7).		
	Required when project will entail a significant flood plain encroachment.		
	FHWA Flood Plain Finding:	See Exhibit:	
15.	Wetlands Finding (See Section 26-8).		
	Required when a project involving Federa adverse impacts to wetlands.	I funding or approvals involves unavoidable	
	FHWA Wetlands Finding:	See Exhibit:	
16.	Wetlands Mitigation/Compensation Plan (Se	ee Section 26-8).	
	Required for adverse wetlands impacts as directed by the Corps of Engineers Section 404 permit requirements or when the wetlands impacts are subject to compliance with the Illinois Interagency Wetland Policy Act.		
	Corps Approval of Plan:	Date:See Exhibit:	
	IDNR Approval of Plan (See Topic #17).		

17. Illinois Interagency Wetland Policy Act Compliance (See Section 26-8).

Required for any project involving adverse impacts to wetlands **except** the following actions which are specifically excluded:

- Activities undertaken for the maintenance of existing ponds, storm water detention basins and channels, drainage ditches, or navigation channels
- Installation of signs, lighting, and fences and the mowing of vegetation within existing maintained rights-of-way, provided these actions do not jeopardize the existence of a threatened or endangered species, Illinois Natural Area Inventory Site, or the designated essential habitat of a threatened or endangered species
- Repair and maintenance of existing buildings, facilities, lawns, and ornamental plantings
- Issuance of permits and licenses

IDNR Response to Wetland Impact Evaluation Form:

- Construction projects that were let for bidding prior to May 6, 1996
- Application of media (including deicing chemicals) on the surface of existing roads for the purposes of public safety
- Non-surface disturbing surveys and investigations for construction, planning, maintenance, or location of environmental resources

Date:

	IDNR Approval of Wetlands Compensation Plan:	See: Date: See:	
18.	Wild and Scenic River Act Coordination (see Part	III, Appendix C, Section C-1).	
	Required for Federally assisted projects involving free-flowing characteristics of a Wild and Scenic potential addition to the National Wild and Scenic leads to the National Wild and S	River or river designated for study as a	
	Response from Federal Agency that Administers River Segment:	Date:	
19.	Federal Endangered Species Act Compliance (Se	e Section 26-9).	
	Required when project will involve Federally listed species or critical habitat.		
	Response from USFWS:	Date:	

CHECKLIST FOR PHASE I REPORTS

20a.	State Endangered Species and Natural Areas P 26-9).	rotection Act Compliance (See Section		
	Required for projects that may adversely affect a species or natural area.	a State-listed threatened or endangered		
	Response/Biological Opinion from IDNR:	Date:See Exhibit:		
20b.	State Endangered Species Protection Act Incident	tal Taking Authorization		
	Required for any project that will result in killing species.	ng or injuring of a State-listed animal		
	Incidental Taking Authorization recommended?	Yes No		
21.	Federal AD1006 Form for Evaluation of Farmland 10).	d Conversion Impacts (See Section 26-		
	Required for projects that require additional right-of-way outside of any corporate limits unless any one of the paragraphs in Section 26-10.04(b) applies.			
	AD1006 Form:	See Exhibit:		
22.	State Farmland Preservation Act Compliance (Sec	e Section 26-10).		
	Required for State highway and bridge projects funds and which require additional right-of-way 10.05(b) apply.			
	Response from IDOA: Date:	See Exhibit:		
23.	Noise Analyses (Including Construction Noise; Se	e Section 26-6).		
	Required for projects involving the construction of physical alteration of an existing State highway horizontal or vertical alignment or increases the number of the project of the projec	which significantly changes either the		
	Noise Analysis:	See:		

24.	Air Quality Conformity Documentation (See Section	on 26-11).	
	Required for all State highway projects funded or <i>USC</i> and to "regionally significant projects" in non such projects are Federally funded or approved un	attainment areas, reg	
	Statement on Conformity:	See:	
25.	Air Quality - Microscale CO Analysis (See Se 3.09(e)).	ctions 23-2.02(e), 24	-3.07(e), and 25-
	Potential involvement if the project will have an a upon completion of the project.	everage daily traffic gr	reater than 16,000
	Microscale CO Analysis:	See:	
26.	Special Waste Procedures Compliance (See Sect	<u>ion 27-2)</u> .	
	Required for all State highway projects.		
	CERCLIS Statement: Results of Screening/Survey (as appropriate):	See:	
27.	Section 401 Water Quality Certification (See Section	on 28-2).	
	Required for any Federal license or permit that United States.	involves a discharge	into waters of the
	401 Water Quality Certification required?	Yes	No
28.	Section 404 Permit (See Section 28-2).		
	Required for discharge of dredge or fill material in wetlands.	to waters of the Unite	d States, including
	Section 404 Permit required?	Yes	No
29.	Section 9 Permit (See Section 28-2).		
	Required for construction of bridges or causewa States.	ys over navigable wa	iters of the United
	Section 9 permit required?	Yes	No

30.	Section 10 Permit (See Section 28-2).			
	Required for structures or work (other than navigable waters of the United States.	bridges and causeways	s) that affects the	
	Section 10 permit required?	Yes	No	
31.	Section 402 National Pollutant Discharge Eli Permit (See Section 28-2).	mination System (NPD	ES) Point-Source	
	Required for projects, such as rest areas, t pollutants into waters of the United States.	:hat involve a point-sou	urce discharge of	
	NPDES point-source permit required?	Yes	No	
32.	Section 402 NPDES Construction Permit (See S	Section 28-2).		
	Required for projects that will involve clearing result in the disturbance of 5 acres (2.02 hectal March 10, 2003, this permit will be required for of one acre (4050 m²) or more of total land area	ares) or more of total lar r projects that will result	nd area. Effective	
	NPDES construction permit required?	Yes	No	
33.	IDNR/Office of Water Resources Floodway Per	mit (See Section 28-3).		
	Required for construction in the floodway of identified streams serving a tributary area of 650 acres (259 hectares) or more in urban areas or 6500 acres (2590 hectares) or more in rural areas.			
	Floodway permit required?	Yes	No	
34.	IDNR/Office of Water Resources Public Waters	Permit (See Section 28-	<u>-3)</u> .	
	Required for construction in rivers, lakes, strewaters."	eams, and waterways o	considered "public	
	Public waters permit required?	Yes	No	

35.	IDNR/Office of Water Resources Permit for Floodway Construction in Northeastern Illin (See Section 28-3).				
	Required for new construction within the regul streams in Cook, DuPage, Kane, Lake, McHenry, Chicago.				
	Permit for floodway construction in Northeastern Illinois needed?	Yes No			
36.	Hydraulic Analysis/Report (See 2-602 of the IDOT Drainage Manual).				
	Required for all drainage structures designed of Bridges and Structures.	or reviewed by the central Bureau of			
		See:			
37.	Coordination with Division of Aeronautics.				
	Required for projects that have obstructions greater than 12 ft (4 m) height or the new vertical or horizontal alignment and that are within 2 miles (3.2 km) of public a within 1 mile (1.6 km) of private airports, or within 0.5 miles (800 m) of a restricted strip.				
	Response from Division of Aeronautics:	Date:See Exhibit:			
38.	Coordination with Federal Aviation Administration (See Section 11-2).				
	Required for publicly owned airports.				
	Response from FAA:	Date:			
		See Exhibit:			
39.	Crash Data and Analysis (See Section 11-2).				
	Required for all projects. (Should include informati	ion on wet weather cluster sites.) See			

40.	Bridge Condition Report (See Chapter 39).			
	Required for bridge work.			
	Bridge Condition Report Approval Letter:	See Exhibit: _		
41.	Pavement Analysis (See Chapter 54).			
	Proposed Typical Cross Section or BDE Approval Letter	See:		
42.	Traffic Management Analysis Report (See Cha	npter 13).		
	Required to indicate how traffic will be maintain	ned during reconstr	ruction or rehabilitation.	
		See:		
43.	Geotechnical Report (See Section 11-2).			
	Required for projects on new alignment or maj	or reconstruction p	rojects.	
44.	Tree Survey (See Chapter 59).	See:		
	Required for projects that may require removal of trees.			
	Was a tree survey conducted?	Yes See:	No	
45.	Mailbox Supports (See Chapters 49 and 58).			
	Have supports been investigated and property owners contacted?	Yes See:	No	
46.	Bicycle Accommodations (See Chapter 17).			
	Have accommodations been considered and investigated?	Yes See:	No	
47.	Other Coordination.			
	Examples would include, but not be limited organizations (such as local historic preserva drainage districts).			
		See Exhibit(s):	

12-3(50)

12-3.10 Phase I Report Exemptions

There are certain projects that are not complex from an engineering standpoint. Also, they do not cause sufficient impacts to require the preparation of a Phase I report for approval by BDE. Accordingly, a less complex procedure can be used. In this case, the district staff prepares a set of documents designated as the Plans, Specifications, and Estimates (PS&E). In some cases, a Skid-Crash Reduction Analysis may be required. All of these documents are transmitted directly to the BDE Project Development and Implementation Section for processing on a bid letting.

The following project types (and combinations thereof) that are constructed within existing rightof-way will not require Project Reports and, therefore, are intended to expedite processing and design approval:

- 1. traffic signal modifications and installations of new signals;
- 2. signing;
- 3. pavement markings not affecting the number of through traffic lanes;
- 4. anti-skid treatments and pavement reprofiling;
- 5. curb and/or gutter repairs and construction of curb ramps for the disabled;
- 6.* bridge repairs, which do not require traffic detours or runarounds, including:
 - a. bridge rail replacement;
 - b. bridge deck overlay and waterproofing;
 - c. expansion joint replacement;
 - d. bearing replacement;
 - e. repairs to deck, partial or full depth;
 - f. repairs to damaged rails, corroded or damaged structural steel members, and deteriorated areas of concrete elements including sidewalks, curbs, water tables, girders, and portions of the substructure above ground or water;
 - g. painting of structural steel; and
 - h. individual stringer replacement for a portion of a superstructure;

- * Note: All items under Number 6 require coordination with the Bureau of Bridges and Structures prior to preparation of final plans. Additionally, Item 6a requires TSL plan approval and Item 6e requires approval of a "Bridge Deck Condition Report."
- 7. the following lighting and electrical work:
 - a. continuous and tower lighting,
 - b. tunnel lighting,
 - c. temporary lighting,
 - d. bridge lighting,
 - e. pedestrian lighting,
 - f. pumping station,
 - g. highway advisory radio,
 - h. control systems for changeable lanes,
 - i. traffic monitoring systems, and
 - j. changeable message signing;
- 8. landscaping;
- 9. the following erosion control within existing right-of-way:
 - a. slope repair,
 - b. ditch and culvert cleaning, and
 - c. miscellaneous storm sewer work to eliminate ditch (which does not reduce necessary urban runoff storage/retention);
- 10. impact attenuator and glare screen installations;
- 11. the following isolated highway-railroad grade crossing improvements:
 - a. repair/rehabilitation of crossing proper,
 - b. rehabilitation of immediate roadway approaches to crossing, and
 - c. upgrading of crossing protection;
- 12. the following restoration projects:
 - a. retaining wall repair (coordinate with Bureau of Bridges and Structures),
 - b. fencing,
 - c. guardrail repair,
 - d. pavement and shoulder patching/sealing,
 - e. intermittent resurfacing, and
 - f. repairs to drainage structures not requiring traffic detours or runarounds;

- 13. installation of turning lanes within an existing median;
- 14. junkyard screenings;
- 15. upgrading safety features;
- approval of utility installations along or across a transportation facility, excluding longitudinal installations within the access control lines of Interstate and freeway rights-ofway;
- 17. activities included in the highway safety plan developed pursuant to 23 USC 402;
- 18. alterations to existing buildings to provide for noise reduction and/or the installation of noise abatement barriers;
- 19. emergency repairs under 23 USC 125 which do not substantially change the design of the facility and which are commenced during or immediately after the occurrence of a declared national disaster;
- 20. acquisition of scenic easements;
- 21. minor improvements to existing rest areas and truck weigh stations which do not require changes to the geometrics or to the number of parking stalls;
- 22. installation of noise barriers;
- 23. approval of air space agreements; and
- 24. disposal of excess right-of-way.

12-4 ESTIMATE OF COST FORMATS

12-4.01 Corridor or Feasibility Studies

These studies are general in nature and are usually comparing alternative corridors or locations. Therefore, the cost estimate is generalized and is made on a per-mile (per-kilometer) basis or by assigning lump-sum dollar amounts to major items.

The format of the cost estimate sheet should only cover major items plus a contingency figure. As a guide in preparing generalized estimates, see Chapter 65 or the latest instructional manual for preparing an Interstate Cost Estimate.

12-4.02 Design Reports, Combined Design Reports, and State Improvement Reports

Figure 12-4A presents the cost items normally used for major projects. See Section 12-1.02 for a description of typical projects in this category. Items may be added or further divided as necessary to properly identify costs on specific projects. Individual cost estimate sheets are usually necessary for each construction segment, which then make up the total cost of each alternative. This segment type format allows the project to be easily programmed for multi-year construction and to provide for usable highway segments. Individual major elements such as interchanges or bridges are listed separately to identify their location and costs. For additional guidance, see Chapter 65.

12-4.03 Project Reports and Other Reports

Figure 12-4B presents a sample cost estimate form with work classification elements considered appropriate for a Project Report or Abbreviated Project Report. This form may be copied and inserted directly into reports or may be modified to fit a specific improvement.

For other reports (e.g., 3P Reports, SMART Reports), the cost estimate is completed on work sheets and the total cost for the project is listed in the report; see Figures 12-3E and 12-3F. For improvements not requiring a Project Report (i.e., Phase I Report Exemptions, see Section 12-3.10), the cost estimate is prepared at the same time as the PS&E package and itemized by pay items.

COST ESTIMATE

Date:	Designer:
Route:	City/County::
Section:	Base Year:

Sec	tion: Bas	e Year: _					
		Estimated Costs in \$1000's					
	WORK CLASSIFICATION	1	2	Segr 3	nents 4	5	Totals
1.	Clear and Grub (Minor removal items and demolition)			<u> </u>	7	3	Totals
2.	Earthwork						
	a. Mainline grading and drainage (minor structures).						
	b. Frontage road grading and drainage (minor structures).						
3.	Pavement						
	a. Mainline subbase, base, surface, and shoulder						
	b. Frontage road, subbase, base, surface, and shoulder						
4.	Grade Separations						
	a. Railroads						
	 Highway grade separations, including earthwork and pavement (without ramps). List each separately. 						
	c. Structure removal						
5.	Interchanges (structure, crossroad and ramp earthwork, and crossroad and ramp pavements). List each separately. (Do not include mainline grading or pavement.)						
6.	Structures						
	a. Drainage (major structures)						
	b. Walls (retaining or reinforced earth)						
7.	Miscellaneous Items						
	a. Guardrail, fencing, and lighting						
	b. Traffic control						
	c. Traffic signals (modernization or new)						
	d. Signing						
	e. Railroad Crossing Improvements						
	f. Field Office and Laboratory						

COST ESTIMATE FORMAT (Complex Projects)

		Estir		sts in \$10	000's	
WORK CLASSIFICATION		2	Segr 3	nents 4	5	Totals
8. Other Items						
a. Erosion Control						
b. Landscaping						
c. Rest areas or other amenities						
d. Environmental mitigation						
9. Traffic Management Costs						
a. Crossovers						
b. Temporary roadways						
c. Detours						
10. Subtotal (Categories 1 - 9)						
11. Contingencies (% of Line 10). (Should not exceed 20%).						
12. Total Construction Cost (Lines 10 and 11)						
13. Right-of-Way						
a. Residential property and relocations						
b. Farm and business property and relocations						
14. Utility Adjustments						
15. *Preliminary Engineering (% of Line 12).						
16. *Construction Engineering (% of Line 12)						
17. Total Project Cost (Lines 12 - 16)						
18. Local Participation						

Note: *If consultant work is anticipated for preliminary engineering or construction engineering, these items should be listed separately in submission of costs for programming purposes.

COST ESTIMATE FORMAT (Complex Projects)

Figure 12-4A (Continued)

COST ESTIMAT	Е
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Date:	Designer:
Route:	City/County::
Section:	Base Year:
WORK CLASSIFICATION	Estimated Costs in \$1000's
Clearing; Minor Removal Items	
2. Earthwork	
3. Erosion Control	
4. Drainage	
5. Subbase, Base, Surface, Shoulders	
6. Guardrail, Roadside Safety	
7. Traffic Signals (Modernization or New)	
8. Detours, Temporary Traffic Control - Roadway	
9. Railroad Crossing Improvements	
10. Field Office and Laboratory	
11. Environmental Mitigation/Incidental Items	
12. Roadway Subtotal (Categories 1-11)	
13. Structure Removal	
14. Major Culverts	
15. Bridges	
16. Structures for Detours and Temporary Traffic Control	
17. Structure Subtotal (Categories 13 - 16)	
18. Roadway and Structure Subtotal (Lines 12 and 17)	
19. Contingencies (% of Line 18) (should not exceed 15	%)
20. Total Construction Cost (Lines 18 and 19)	
21. Utility Adjustments	
22. Land Acquisition and Relocations	
23. *Preliminary Engineering (% of Line 20)	
24. *Construction Engineering (% of Line 20)	
25. Total Project Cost (Lines 20 - 24)	

Note: *If consultant work is anticipated for preliminary engineering or construction engineering, these items should be listed separately in submission of costs for programming purposes.

COST ESTIMATE FORMAT
(Project Reports)
Figure 12-4B

12-5 PROCESSING AND APPROVAL OF PHASE I REPORTS

To ensure uniform designs throughout the State, representatives from BDE and the FHWA, if applicable, attend regularly scheduled district coordination meetings to discuss proposed highway improvements for the annual and multi-year programs. These meetings allow the districts to discuss the proposed design of projects and any alternatives, whether or not public involvement is required, type of report processing, expected environmental issues, and the possibility for design exceptions.

This meeting process allows for considerable discussion during project development and ensures that the proper design is being proposed before a Phase I engineering report is written and completed. This process also helps ensure that reports will cover the appropriate information and that projects are being designed cost-effectively. If projects include accommodation for bicycles, notify BDE's Bicycle Coordinator. For exceptions to geometric design criteria, see Chapter 31.

Because the Department is operating under a Project Oversight Agreement, Department personnel give all design approvals of the engineering aspects of a project, except for the Interstate. See Chapter 31 for discussion of oversight procedures.

For major studies, the Phase I project development networks in Chapters 2 and 3 illustrate the location/design study coordination for environmental studies, public involvement activities, and processing requirements for reports on major studies.

12-5.01 Corridor and Feasibility Study Reports

For Corridor and Feasibility Study Reports, the following will apply:

- 1. <u>Submittal of Reports</u>. BDE will approve a highway corridor only after the following has occurred:
 - The requirements of Chapter 11 and other applicable laws and regulations (e.g., those related to Chapter 19 and Part III, Environmental Procedures) have been met.
 - The public involvement activities as required by Chapter 19 have been fulfilled.
 - If the National Highway System (NHS) is involved with the corridor, coordination and oversight with the FHWA has been completed. This is usually accomplished at district coordination meetings or at special district meetings. Include the minutes of these meetings in the report.
 - The district has submitted three copies of a Corridor Report or Feasibility Study Report and any separate appendices to the Report.

- One copy of the Public Involvement Document has been submitted, if applicable, which assembles all letters received, comments received, and copies of advertising notices published in newspapers which describe dates and details for informational meetings.
- The district has written a detailed memorandum describing the reasons for selecting the recommended corridor, the items submitted, and requesting corridor approval.
- Corridor Approval. The Bureau Chief of Design and Environment will grant corridor approval with concurrence of the Director of the Division of Highways. The Secretary of IDOT and the Director of the Office of Planning and Programming should also be contacted on their desire for a briefing meeting before approval is granted.
- 3. <u>Feasibility Study Approval</u>. For feasibility studies which do not involve a corridor, concurrence of the recommendations will be by the Bureau Chief of Design and Environment.

12-5.02 Design Reports

For Design Reports, the following will apply:

- 1. <u>Submittal of Reports</u>. BDE will approve a highway on new alignment (e.g., freeway, expressway, bypass) which is documented in a Design Report only after the following has occurred:
 - The corridor has been approved.
 - The applicable requirements of Chapter 11 and other applicable laws and regulations (e.g., those related to Chapter 19 and Part III, Environmental Procedures) have been met.
 - The appropriate number of copies of the FEIS or EA and Appendix A have been submitted by the district as described in Part III, Environmental Procedures.
 - The district has submitted two copies of the Design Report and Appendices including copies of any Technical Reports listed in Section 11-5.04(h).
 - The Bureau of Design and Environment's Bicycle Coordinator has been notified.
 See Chapter 17 for Bicycle and Pedestrian Accommodation.
 - The public involvement activities as required by Chapter 19 have been fulfilled.

- If the proposed highway is part of the designated National Highway System (NHS), coordination and oversight with the FHWA have been completed. This is usually accomplished by special district meetings with the FHWA. Include the minutes of these meetings in the report.
- Two copies of the Public Involvement Document have been submitted which assembles all letters received, comments received, copies of advertising notices published in newspapers for informational meetings and public hearings, and the disposition of comments.
- Two copies of the Advisory Committee/Working Groups Document have been submitted, if applicable, which provides the description and summary of this process. See Chapter 19 for details.
- BDE and/or FHWA has concurred and approved any design exceptions to the project as discussed in Chapter 31. FHWA must approve Level 1 design exceptions on the Interstate. These are not covered by IDOT's Project Oversight Agreement procedures.
- The district has written a memorandum describing the reasons for selecting the recommended alignment and design features, the items submitted, and requesting design approval.
- 2. <u>Design Approval</u>. Before design approval on the engineering aspects of a project can be given, FHWA must approve the FEIS (Record of Decision) or EA (FONSI). Once the environmental document is approved, the Bureau Chief of Design and Environment will grant design approval with concurrence of the Director of the Division of Highways. The Secretary of IDOT and the Director of the Office of Planning and Programming should also be contacted on their desire for a briefing meeting before design approval granted. A sample design approval sign-off sheet is shown in Figure 12-5A.

12-5.03 Combined Design Reports

For Combined Design Reports, the following will apply:

- 1. <u>Submittal of Reports</u>. BDE may approve a proposed improvement where the corridor or location has been predetermined and is documented in a Combined Design Report only after the following has occurred:
 - The applicable requirements of Chapter 11 and other applicable laws and regulations (e.g., those related to Chapter 19 and Part III, Environmental Procedures) have been met.

FEDERAL AID PRIMARY ROUTE 413 FROM INTERSTATE ROUTE 270 AND INTERSTATE ROUTE 255 INTERCHANGE IN MADISON COUNTY TO ILLINOIS ROUTE 267 NORTH OF ALTON, ILLINOIS IN MADISON COUNTY

FINAL DESIGN REPORT

Prepared by the Illinois Department of Transportation

August 1998

The proposed action is the construction of approximately 21 miles (34 km) of four-lane, fully access-controlled, divided highway. The proposed highway extends from the directional interchange of I-270 and I-255 west of Glen Carbon to Illinois Route 267 north of Alton.

This Design Report addresses the no-action alternative and the option of improving existing highways in the study area. Detailed studies for five build alternatives are also presented in this document.

An Environmental Impact Statement has been prepared and approved in conjunction with this Design Report and assesses the potential social, economic, and environmental effects of the various alternatives. The recommended alternative for construction is Alternative C.

Design Approval		
-	Bureau of Design & Environment	Date

EXAMPLE OF DESIGN APPROVAL SHEET (Major Type Project)

Figure 12-5A

- The appropriate number of copies of the FEIS or EA and Appendix A have been submitted by the district as described in Part III, Environmental Procedures; or if the project qualifies as an ECAD/Categorical Exclusion, the environmental documentation is included in the Combined Design Report.
- The district has submitted two copies of the Combined Design Report and Appendices including copies of any Technical Reports listed in Section 11.5.04(h).
- The public involvement activities as required by Chapter 19 have been fulfilled.
- Two copies of the Public Involvement Document have been submitted which assembles all letters received, comments received, copies of advertising notices published in newspapers for informational meetings and public hearings and the disposition of comments.
- Two copies of the Advisory Committee/Working Groups Document have been submitted, if applicable, which provides the description and summary of this process; see Chapter 19 for details.
- BDE and FHWA have concurred, and BDE has approved, any design exceptions to the project. However, if the project involves the Interstate, FHWA must approve any Level 1 design exceptions.
- The district has written a memorandum describing the reasons for selecting the recommended alignment and design features, the items submitted, and requesting design approval.
- 2. <u>Design Approval</u>. If an FEIS or EA is required for the project, FHWA must approve the separate environmental document before design approval can be given on the Combined Design Report by BDE. If the project qualifies as an ECAD/Categorical Exclusion type project, design approval is obtained from BDE along with concurrence of the environmental issues as described in the report. FHWA signs the ECAD document which applies to environmental studies and grants Categorical Exclusion concurrence.

On most projects, design approval will be granted by the Section Chief of the Project Development and Implementation Section, after receiving a recommendation from the Regional Field Engineers in the Section. However, for expressway projects, the Bureau Chief of Design and Environment will grant the design approval. For controversial projects, the Bureau Chief of Design and Environment and the Director of the Division of Highways should be contacted on their desire for a briefing meeting before design approval is granted.

12-5.04 State Improvement Reports

For State Improvement Reports, the following will apply:

- 1. <u>Submittal of Reports</u>. Projects in this category are similar to those covered in a Combined Design Report (major improvements) except that a decision was made during the programming process not to use Federal funds on the project. BDE approves projects in this category without FHWA involvement after the following has occurred:
 - The public involvement activities as required by Chapter 19 have been fulfilled.
 - Environmental information and documentation have been completed. Use the ECAD record form as a checklist to determine potential project impacts. Include a summary and analysis of impacts as a separate section in the report.
 - The district has submitted two copies of the State Improvement Report and Appendices including copies of any Technical Reports.
 - BDE has concurred in and approved any design exceptions to the project.
 - The district has written a memorandum describing the reasons for selecting the recommended design alternative, the items submitted, and requesting design approval.
- 2. <u>Design Approval</u>. Design approval will be granted by the Section Chief of the Project Development and Implementation Section, after receiving a recommendation from the Regional Field Engineers in the Section. For controversial projects, the Bureau Chief of Design and Environment and the Director of the Division of Highways should be contacted on their desire for a briefing meeting before design approval will be granted.

12-5.05 Other Type of Reports

12-5.05(a) Submittal of Reports

Projects in this category of improvement are documented by using an Abbreviated Project Report (Figures 12-3B and 12-3C), a Project Report (Figure 12-3A), a 3P Report (Figure 12-3E), or a SMART Report (Figure 12-3F).

For certain types of projects as listed in Section 12-3.10, the preparation of a report to document engineering decisions is not required. These projects, which are exempt from the preparation of a Phase I engineering report, require no right-of-way and are prepared only as a PS&E submittal to BDE.

Depending on the type of project and whether or not a report must be prepared to document engineering decisions, either BDE or the district gives design approval. If the proposed improvement requires approval by BDE, submit two copies of the report to BDE for review and processing. If the district engineer can approve the proposed improvement, submit one copy of the signed report to BDE. Figure 12-5B illustrates the recommended approval form for Project Reports. Figures 12-3E and 12-3F provide the recommended approval forms for 3P and SMART reports, respectively.

Before any reports can be finalized and submitted to BDE, the district and the BDE regional field engineers must determine if any design exceptions on the project are required and, if so, concurrence of the exception must be approved by the Regional Field Engineer through discussions at a district coordination meeting. See Chapter 31 for guidelines on design exceptions.

12-5.05(b) District Engineer Approvals

Approval authority is granted to District Engineers for the following types of projects:

- 1. <u>3R Projects</u>. All 3R projects on marked and unmarked State highways may be approved by the District Engineer except for:
 - safety projects,
 - those on Interstate routes and other access controlled highways,
 - those requiring conversions of existing medians or through lanes to two-way, leftturn lanes, and
 - those requiring changes in the number of through travel lanes.
- 2. <u>New Right-of-Way</u>. For projects requiring 3 acres per mile (0.75 hectares per kilometer) or more of new right-of-way, the District Engineer may approve these projects provided the following have been met:
 - all coordination procedures with resource agencies (e.g., IDNR, IDOA) have been followed;
 - the Environmental Section and resource agency sign-offs have been obtained;
 - all design exceptions have been approved by the BDE Regional Field Engineers;
 and
 - the necessary geometric design approvals have been issued by BDE.

ILLINOIS DEPARTMENT OF TRANSPORTATION

Key Route:		PPS No.:		
F.A. Route:	Marked Route	: County:		
Section:		_ Project Length: Program N		
Job Number:	Contract No.:	Program N	0.:	
Location:	Foliation Familia			
Need for Proposed Imp	crovement:			
Design Policies Used:	☐ New Construction	☐ Reconstruction ☐ 3R ☐ Ot	her	
General Description of	Proposed Improvement:			
	of ROW to be Purchased:Parcels Totaling			
Number of Businesses	: and Residence	es: to be acquired.		
Estimated Program Co Construction Cost: Litility Pelocation Cost:	ost: (in FY	Dollars) Fund Type: Row Cost: Consultant P.E. Cost:		
Is cooperation/participa	ation by local agency in a	ccordance with Department policy?	YES	NO
Coordination Meetings	: Are minutes from distric	et coordination meetings attached?	YES	NO
Design Exceptions:Level One RedLevel Two RedIf yes, note dat	•		YES YES	NO NO
 Type of Public Involver Public Hearing Informational N Property Owner 	Offered? Meeting Held?		YES YES YES	NO NO NO
*Categorical Exclusion	Certification Statement (Group I):		
will not involve		Exclusion action. It has been determ al Circumstances." Therefore, the pro- clusion.		
District Design Approv	al			
		IDOT District Engineer		Date
	OR			
*FHWA Categorical Ex				
Concurrence (Group I				
Concarrence (Croup i	102110,000,	FHWA Representative		Date
PDE Docion Approval				
BDE Design Approval		Bureau of Design & Environment (Regional Field Engineer)		Date
*Note: See Section 23	3-1.05.	(. 15g.5.ia. i ioia Eliginosi)		

PROJECT REPORT APPROVAL FORM

Figure 12-5B

- 3. <u>Proposed Turn Lanes</u>. For 3R projects, District Engineers may approve the addition of left-turn lanes in existing medians or islands at existing intersections and may also approve the addition of right-turn lanes. However, if the right-of-way requirements cause a change from a Group I to a Group II Categorical Exclusion, the District Engineer must ensure that all necessary coordination has occurred and that all essential approvals have been obtained before granting approval.
- 4. <u>Intersection Improvements</u>. District Engineers may approve intersection improvement projects provided an intersection design study has been prepared according to the criteria in Chapter 14, the district geometrics engineer has reviewed and approved the intersection design study, and the district geometrics engineer has been certified by BDE. If the district geometrics engineer has not been certified by BDE, submit the intersection design study to BDE for approval. At times, a certified district geometrics engineer may be transferred into a position with responsibilities different than those involved when the certification was obtained. For these cases, BDE must reissue the certification in writing for the new district geometrics engineer. Once the new district geometrics engineer has been certified, the District Engineer may again approve intersection improvement projects and intersection design studies as stated above. All interchange type and design studies will be approved by BDE.
- 5. <u>Structure Improvement Projects</u>. District Engineers may approve the following non-Interstate projects, with no in-stream impacts, provided the usual approvals, including bridge deck milling and resurfacing, are received from the Bureau of Bridges and Structures and concurrence on the bridge width is received from the Regional Field Engineer:
 - a. <u>Stream Crossings</u>. Approval may be granted for stream crossings where the existing waterway opening and design highwater clearance are satisfactory and will be retained, and there will no additional lanes added to the structure. These projects may include bridge deck replacements, bridge superstructure replacements, and bridge widening with no substructure work. The Bureau of Bridges and Structures must provide concurrence of the Bridge Condition Report and hydraulic clearances prior to the District Engineer's approval.
 - b. <u>Grade Separations</u>. Approval may be granted for rehabilitation of grade separations where the existing vertical clearances are acceptable and can be maintained and where there will be no additional lanes added to the structure. These projects may include bridge deck replacements, bridge superstructure replacements, and bridge widening with some substructure work to meet current horizontal clearance requirements. The Bureau of Bridges and Structures must provide concurrence of the Bridge Condition Report prior to the District Engineer's approval.
- 6. <u>3P and SMART Projects</u>. District Engineers will typically approve these projects. Discuss these projects at the district coordination meetings to determine if there is a potential for unusual circumstances or if any design exceptions are required.

The District Engineer may only re-delegate authority to signoff on projects to the district Program Development Engineer. To ensure the approval authority outlined above for District Engineers is being exercised uniformly on a Statewide basis and to provide consistency in project development procedures, process reviews may be conducted by BDE on a random basis. This will allow the Department to maintain the integrity of its Project Oversight Agreement with FHWA.

12-5.05(c) Bureau of Design and Environment Approvals

For any type of proposed improvement not eligible for District Engineer approval, the report (e.g., Abbreviated Project Report, Project Report, 3P Report, SMART Report) is submitted to BDE and approved by the Regional Field Engineer in the Project Development and Implementation Section.

12-5.06 Reports for Routes with Combined Jurisdictions

Where BDE and the Bureau of Local Roads and Streets (BLR&S) have joint jurisdiction of a facility, the following sections will apply.

12-5.06(a) State Highway System

For Federal-aid projects, use the Department's Project Oversight or Exempt Procedures; see Chapter 31. It will not be necessary to submit Project Reports to FHWA for design approval or concurrence except for projects on the Interstate system. However, FHWA still has oversight responsibilities on all Federal-aid projects that have any potential for significant environmental impacts and/or involvement with multilane access-controlled facilities on the National Highway System (NHS). In addition, all Group II Categorical Exclusion projects with potential for "unusual circumstances" must be discussed with FHWA at district coordination meetings. In addition, consider the following:

- 1. <u>No Jurisdictional Transfer</u>. The following applies to all State routes, marked or unmarked:
 - a. Reports. Discuss all projects at district coordination meetings before finalizing and submitting any reports. Reports prepared by the district or their consultant should be submitted to BDE for review, approval, or information. Reports prepared by the local agency or their consultant should be submitted to BLR&S for review, approval, or information. When the need for a design exception is discovered at the local coordination meeting on routes under State Jurisdiction, BLR&S will coordinate and discuss this information with BDE prior to approval action.

- b. <u>NHS Facilities</u>. If a local agency is preparing the report for a State highway on the NHS, BDE will review the highway geometrics and cross-section design during the development of preliminary alternatives stage. Once the geometrics and cross-section designs are agreed to, BLR&S will review the report and process it accordingly.
- 2. <u>Jurisdictional Transfer to a Local Agency</u>. The following will apply:
 - a. <u>Federal Funds</u>. Regardless of which agency initiates a project, submit the Project Report to BLR&S for review and approval. When the State is providing matching funds, BLR&S will coordinate the design requirements with BDE prior to approval.
 - b. <u>State-Only Funds</u>. The preparation of a Project Report will usually be required. Submit the report to BDE for review and approval, as required, when reports are prepared by the district or their consultant, or to BLR&S if a local agency or their consultant prepared the report. The local agency should coordinate the proposed design with the district BLR&S before submitting the report to the Central Office.
 - c. <u>District Coordination Meetings</u>. For jurisdictional transfers using either Federal funds or State-only funds, it is imperative that these projects be discussed at the district coordination meetings. This will allow BDE and BLR&S to become aware of proposed design features and costs and to determine if the project is still the same as originally discussed during programming meetings.
 - d. <u>Agreements</u>. Ensure all joint projects conform to the Department's participation policies for joint agreements; see Chapter 5.
 - e. <u>Review of Agreements</u>. After joint agreements are finalized by district staff and submitted to BLR&S, BLR&S will forward agreements to BDE for their review and concurrence. In addition to the normal review by the BDE Preliminary Engineering Section, the Regional Field Engineers will also review the agreement for proper design content.

12-5.06(b) Local Highway System

The following will apply to projects on the local highway system (e.g., county highways, township roads, municipal streets):

1. <u>Federal Funds</u>. Submit the Project Report to BLR&S for review, coordination, and approval. When the State highway system is involved (e.g., an intersection with a State highway), the district geometrics engineer will review the design to the extent appropriate and obtain any approvals of exceptions to geometric policy from BDE.

Concurrence with the intersection design should be accomplished prior to submittal of the report to BLR&S for approval.

 Other Funds. No report will be necessary. Environmental coordination and design exceptions should be processed through BLR&S. The district geometrics engineer may be requested to review the intersection design studies. The district BLR&S will approve the construction plans.

12-5.06(c) Combined Systems

For projects that have substantial work on both highway systems, use the following procedures:

- 1. <u>State-Only Funds</u>. For projects being developed with State-only funds, process the Project Reports through BDE when Central Office design approval is required.
- Federal Funds. For projects using Federal funds and where the district or their consultants prepare reports, process the Project Report through BDE. BDE will coordinate any design requirements with BLR&S. Where local agencies and their consultants prepare reports, process the Project Report through BLR&S. BLR&S will coordinate any design requirements with BDE.

12-5.06(d) Modified Procedures

Where special or unusual situations arise during project development, modified review and processing procedures may be necessary. In these cases, the district, BLR&S, and BDE should agree on the modified procedures to use.

12-5.07 Project Reports for the Highway Safety Program

The Hazard Elimination (HE) Program is intended to make moderate cost improvements, addressing specific site-related crashes, and eliminating over-represented crash patterns. These projects will typically require an Abbreviated Project Report or may be exempt from the preparation of a report; see Section 12-3.10.

In many cases, the improvements may be short-term until such time as major reconstruction can be undertaken. Any additional work not directly related to the specific crash problem is not eligible for HE funding, unless it can be justified as being appropriate or necessary due to its relationship with the basic crash history.

In addition to the guidelines in Section 12-3.07, Project Reports for safety improvements will include the District Engineer's concurrence of the project in the Highway Safety Program. Project Reports should include the following information:

- project priority numbers for the annual District Highway Safety Program;
- project locations showing county, route, and limits of construction;
- descriptions of work as determined by the District Highway Safety Program Team;
- estimated costs and benefit/cost ratios; and
- district Highway Safety Team member titles, their bureaus, and signatures together with the District Engineer's concurrence.

Document the selection of a project for the Safety Program on the Program Sheet, see Figure 12-5C, and include it with the Project Report with the PS&E submittal.

When any significant revisions to the scope of work, estimated cost, or benefit/cost ratio are proposed for the annual District Highway Safety Program, the Safety Team members and the District Engineer must sign and submit a Safety Program Revision sheet. Also, include this sheet in the Project Report or with the PS&E submittal. Figure 12-5D illustrates the suggested format for a HE Program Revision Sheet. This information is required for BDE project monitoring activities and provides for Statewide Safety Program and Project Criteria Monitoring, which is a requisite to design approval.

Design approval procedures and the preparation of a Project Report for safety projects are not waived by Departmental Policy TRA-15 and approval procedures and the preparation of a Project Report for safety projects; approval procedures will continue to be in accordance with Section 12-5.05 or Section 12-3.10.

ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT HIGHWAY SAFETY PROGRAM SHEET

District	<u>10</u>	Fiscal Year (FY	') <u>96</u> FY Alloca	ation <u>\$900,000</u>
PRIORITY <u>NUMBER</u>		COUNTY, ROUTE, <u>TERMINI</u>	SCOPE <u>OF WORK</u>	ESTIMATED COST <u>& B/C RATIO</u>
1		Sauk Co., U.S. 12, North Street to Freedom Street in Baraboo	High-Friction Resurfacing & Traffic Signal Modernization 0.3 mi (0.48 km)	
2, 3, etc.				
		COST OF FY SAFET		Date
	Dis	trict Maintenance Safe	ty Team Member	 Date
	Dis	trict Planning Safety T	eam Member	Date
	Dis	trict Design Safety Tea	am Member	Date
Approved:	Dis	trict Engineer		 Date

EXAMPLE HE PROGRAM SHEET Figure 12-5C

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT HIGHWAY SAFETY PROGRAM REVISION * SHEET

District 10			Fiscal Year (FY) <u>96</u>
PRIORITY NUMBER	COUNTY, ROUTE, <u>TERMINI</u>	SCOPE <u>OF WORK</u>	ESTIMATED COST <u>& B/C RATIO</u>
1	Sauk Co., U.S. 12, North Street to *Lake Street in Baraboo	High-Friction Resurfacing & Traffic Signal Modernization, * 0.3 mi (0.48 km)	\$275,000 * B/C = 2.3
	District Traffic Safety Team	n Member	Date
	District Maintenance Safety	Date	
	District Planning Safety Tea	am Member	Date
	District Design Safety Tear	m Member	Date
Approved:			

EXAMPLE HE PROGRAM REVISION SHEET Figure 12-5D

District Engineer

Date

12-6 CORRIDOR PROTECTION

12-6.01 Need

Section 4-510 of the *Illinois Highway Code* (605 ILCS 5/4-510) provides a means of protecting the right-of-way of "future additions" to State highways from future developments. This statute would apply to either new construction on new location or to additions or widening of the existing highway system under the reconstruction category.

Prior to initiating a corridor preservation project, the proposed improvement must be analyzed to determine the potential for development on future right-of-way needs. A proposed highway located in or near a rapidly developing urban area might require corridor protection soon after design approval is received, whereas a proposed highway in a rural area might have little likelihood of immediate development.

12-6.02 Procedures

The Land Acquisition *Policies and Procedures Manual* describes the procedures and exhibits needed to file a Corridor Protection Map.

12-7 ROUTE LOCATION DECISIONS

12-7.01 **Purpose**

A Route Location Decision is a legal declaration made by the Illinois Department of Transportation, establishing the location of a proposed State highway or revising the location of an existing State route, as required by Chapter 605 ILCS 5/4-204 of the *Illinois Highway Code*.

12-7.02 Applicability

Prepare a Route Location Decision where the following occurs on a State highway:

- 1. a route will be developed on a new location;
- 2. there is a change in the termini of an existing route;
- 3. a portion of an existing route will be relocated for a length of 1 mile (1.6 km) or more;
- 4. a portion of an existing route will be relocated a lateral distance of 0.5 miles (0.80 km) or more from the former location;
- 5. a loop or spur will be added to an existing route;
- 6. an existing route will be relocated due to the expansion of airport facilities; and/or
- 7. in conjunction with an Order Establishing a Freeway, the freeway or expressway will be developed on a new location. Where a portion of an existing route will be declared a freeway, a Route Location Decision is not required.

12-7.03 **Content**

The Route Location Decision consists of a detailed legal description referenced to section corners, townships, ranges, and a map upon which the selected route location is shown.

Approximate scale values may be used in the description where field survey data is not available. A county map having a scale 1 in = 1 mile (1:60,000 metric) typically is used to show the route location.

A sample Route Location Decision is shown in Figure 12-7A.

12-7.04 Preparation and Processing

Subsequent to the review of comments received at a public hearing or informational meeting and the disposition of comments, and after design approval of the location is given by BDE, prepare a Route Location Decision and forward it, in duplicate, to BDE. The Preliminary Engineering Section will review the location decision for form and content and will process it for execution.

12-7.05 Execution

Upon execution of the Route Location Decision by the appropriate Department officials, an original copy of the document is returned to the district for recording in the Office of the County Clerk of each county in which the highway is located. Once the recording is complete, the Route Location Decision is returned to BDE for filing.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE LOCATION DECISION

Along Federal-aid Route 155 from Henry Street in Alton, one block east of the Clark Bridge, in a generally southeasterly direction to a point near the intersection with FA Route 4 near Wood River in Madison County.

WHEREAS, the Department of Transportation of the State of Illinois has proceeded to select, lay out, and survey a part of Federal-aid Route 155 along a line as shown on the map attached hereto and made a part hereof, and on a location more particularly described as follows:

Commencing from a stone set at the northwest corner of Front Street and Henry Street, as said streets are now laid out on the plats of the City of Alton, thence South 84 degrees 19 minutes East along an easterly prolongation of the north line of Front Street for a distance of 99.00 feet (30.175 meters) to a point in the east line of Henry Street; thence South 6 degrees 12 minutes West along the east line of Henry Street for a distance of 864.60 feet (263.530 meters) to a point, said point being the POINT OF BEGINNING; thence South 80 degrees 48 minutes East along the centerline of FA Route 155 for a distance of 585.73 feet (178.531 meters) to a point of curve, ...

(continuation of detailed legal description referenced to section corners, townships, and ranges)

... for a distance of 266.82 feet (81.327 meters) to an intersection with the centerline of FA Route 4 (Business U.S. 67); said point of intersection being the <u>END OF ROUTE LOCATION DECISION</u>; and being approximately 1000 feet (305 meters) South 68 degrees 17 minutes West from the east Line of NW 1/4 of Section 28, T5N, R9W of Third Principal Meridian, Madison County.

WHEREAS, the location of Federal-aid Route 155 within the above limits having been fully examined and observed and the width of right-of-way needed for developing and improving said route having been considered and determined; and

WHEREAS, it is required that a detailed description of the location of that part of Federal-aid Route 155 described above, and the width of right-of-way needed for development and improvement be entered of record in the Department of Transportation of the State of Illinois;

IT IS THEREFORE ORDERED, that that part of Federal-aid Route 155 extending from a point on Henry Street in Alton, one block east of the Clark Bridge, in a generally southeasterly direction to a point near the intersection with FA Route 4 near Wood River in Madison County be and is hereby located as described herein, and that the said location as described be and is hereby selected as the location of part of Federal-aid Route 155 and also, that there shall be acquired for this part of Federal-aid Route 155 a general right-of-way width of 200 feet (60.960 meters), except that such additional widths may be acquired as may be required for backslopes in cuts, downslopes in fills, frontage roads to serve built-up areas, and additional areas as may be required at intersecting streets or highways for providing traffic flow, safe-sight distances, and control of access to Federal-aid Route 155.

SAMPLE ROUTE LOCATION DECISION Figure 12-7A

IT IS FURTHER ORDERED Department of Transportation of the		iled as a part of the records of the
ENTERED THIS	day of	20
I	Secretary of	Transportation

SAMPLE ROUTE LOCATION DECISION

Figure 12-7A (Continued)

12-8 ORDER ESTABLISHING A FREEWAY

12-8.01 Freeways and Expressways

- New Locations. According to Chapter 605 ILCS 5/8-101 of the Illinois Highway Code, once it has been decided to control access on a State route, it is necessary to designate and establish the facility as an access-controlled highway. This action is initiated after design approval is obtained for the freeway/expressway. The Order Establishing a Freeway (Order) is a legal declaration made by the Department designating a highway as an access-controlled facility and delineating the extent of the freeway/expressway.
- 2. <u>Revisions to Existing Orders</u>. This situation is identical to "new locations" except that an existing Freeway Order is revised to describe a change in the originally approved access control limits; see Section 37-1.03 and Chapter 35.

12-8.02 Procedures

The Order must include the access limits along the mainline and the specific limits on all crossroads kept open to traffic. The Order contains a legal description of the freeway/expressway referenced to section corners, townships, and ranges. The Order is approved and signed by the Illinois Secretary of Transportation. An original copy of the fully executed Order is returned to the district for recording in the Office of the County Clerk of each county in which the freeway/expressway is located. Once the recording is completed, the Order is returned to BDE for filing. Figure 12-8A illustrates a sample Order.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

ORDER ESTABLISHING A FREEWAY

Along Federal-aid Route 155 from Henry Street in Alton, one block east of the Clark Bridge, in a generally southeasterly direction to a point near the intersection with FA Route 4 near Wood River in Madison County.

The Department of Transportation of the State of Illinois acting under authority conferred on it by "An Act authorizing the Department of Transportation, the County Board of any County, or the corporate authorities of any City, Village, or Incorporated Town to designate and establish existing and proposed highways under their respective jurisdiction and control as freeways, and to limit access thereto" designated as Chapter 605 ILCS 5/8-101, as amended, and the Department being of the opinion that the safety and convenience of highway traffic will be promoted and the public interest subserved thereby, does hereby designate and establish a FREEWAY along the general location of those portions of Federal-aid Route 155 described below, and does declare its intention of proceeding to improvement and develop said portions of Federal-aid Route 155 in a manner which will permit access between said FREEWAY and abutting lands only at entrances provided for that purpose, in accordance with the provisions of said Act:

Commencing from a stone set at the northwest corner of Front Street and Henry Street, as said streets are now laid out on the plats of the City of Alton, thence South 84 degrees 19 minutes East along an easterly prolongation of the north line of Front Street for a distance of 99.00 feet (30.175 meters) to a point in the east line of Henry Street; thence South 6 degrees 12 minutes West along the east line of Henry Street for a distance of 864.60 feet (263.530 meters) to a point, said point being the POINT OF BEGINNING; thence South 80 degrees 48 minutes East along the centerline of FA Route 155 for a distance of 585.73 feet (178.531 meters) to a point of curve, thence along a curve to the right, having a radius of 2864.79 feet (873.188 meters), for a distance of 1879.17 feet (572.771 meters) to a point of tangency; thence South 43 degrees 13 minutes East for a distance of 589.97 feet (179.823 meters) to a point of curve; thence along a curve to the left, having a radius of 3819.72 feet (1164.251 meters), for a distance of 1433.33 feet (436.879 meters) to a point of tangency; thence South 64 degrees 43 minutes East for a distance of 259.62 feet (79.132 meters) to a point of curve; thence along a curve to the right, having a radius of 5729.58 feet (1746.376 meters), for a distance of 2206.67 feet (672.593 meters) to a point of tangency; thence South 42 degrees 39 minutes East for a distance of 1241.69 feet (378.467 meters) to a point of curve; thence along a curve to the left, having a radius of 2864.79 feet (873.188 meters), for a distance of 970.00 feet (295.656 meters) to a point of tangency; thence South 62 degrees 3 minutes East for a distance of 2529.42 feet (770.967 meters) to a point on the westerly edge of east-half of Fractional Section 19. T5N, R9W, 3rd PM; said point being South 0 degrees 51 minutes East a distance of 498.40 feet (151.912 meters) from the center of said Section 19, thence South 62 degrees 3 minutes East for a distance of 791.51 feet (241.252 meters) to a point of curve; thence along a curve to the right, having a radius of 3819.72 feet (1164.251 meters), for a distance of 1631.11 feet (497.162 meters) to a point of tangency; thence South 37 degrees 35 minutes East for a distance of 319.90 feet (97.506 meters) to a point of curve; thence along a curve to the left, having a radius of 2864.79 feet (873.188 meters), for a distance of 1718.34 feet (523.750 meters), to a point of tangency; thence South 71 degrees 57 minutes East for a distance of 1111.06 feet (338.651 meters) to a point of curve; thence along a curve to the right, having a radius of 7473.04 feet (2277.783 meters), (for a distance of 1021.69 feet (311.411 meters) to a point of tangency; thence

SAMPLE ORDER ESTABLISHING A FREEWAY/EXPRESSWAY

South 64 degrees 7 minutes East for a distance of 1256.64 feet (383.024 meters) to a point of curve; thence along a curve to the left, having a radius of 3819.72 feet (1164.251 meters), for a distance of 3173.33 feet (967.231 meters) to a point of tangency, thence North 68 degrees 17 minutes East for a distance of 266.82 feet (81.327 meters) to an intersection with the centerline of FA Route 4 (Business U.S. 67); thence continuing North 68 degrees 17 minutes East along the centerline of SBI Route 3, being also the centerline of Ferguson Avenue, for a distance of 598.70 feet (182.483 meters) to a point, said point being approximately 40 feet (122 meters) South 68 degrees 17 minutes West from the east line of the NW 1/4 of Section 28, T5N, R9W of the Third Principal Meridan, Madison County, and the END OF THIS FREEWAY ORDER.

Notice is hereby given that, in accordance with the provisions of the Act referred to above, no owner of or persons having an interest in land abutting those portions of Federal-aid Route 155 hereby designated and established as a FREEWAY shall lay out, provide, or construct any new means or enlarge or extend any existing means of ingress to or egress from said abutting land from or to such FREEWAY except upon written consent of the Department of Transportation.

Notice is further given that, in accordance with the provisions of the Act referred to above, no new highway, road, street, alley, or other public way shall be opened into or connected with or be carried over or under those portions of Federal-aid Route 155 hereby designated and established as a FREEWAY except upon written consent of the Department of Transportation.

The Department of Transpor	tation
Secretary of Transportation	Date

By Order of

SAMPLE ORDER ESTABLISHING A FREEWAY/EXPRESSWAY

Figure 12-8A (Continued)